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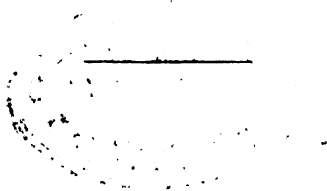
CAPTAIN BASIL HALL,

R.N., F.R.S.



IN TWO VOLUMES.

VOL. II.



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CHAPTER I.

MESSINA.—VOYAGE TO MALTA.

HAVING spent our allotted time at Palermo, we resolved to sail on a certain evening, whatever the weather might prove, a stupid resolution certainly, since it obliged us, as we thought, though there was not the smallest necessity for our moving, to re-embark in our brigantine in one of those pelting, pitiless showers which lying travellers tell us are to be met with only between the tropics of Cancer and Capricorn, but which I can vouch for having often witnessed, as hard, between Charing Cross and Temple Bar. The rain drowned the land wind so effectually that we could not get out of our little mole before five in the morning, when we let fall our dripping sails and stole away from the fairest of fair cities, with an air of wind so light, that the most fastidious poet, wishing to fan the cheek of his love, might have borrowed such a zephyr without disturbing a ringlet of her hair. The mountain-tops, including that of Etna, were cumbered heavily with rain clouds, and far off, in the horizon, we could see squalls, prowling about like sea monsters riding on the waters, seeking for stray ships to drag down to their coral caves.

Little recked Don Giovanni, our captain, of such images; and under his pilotage we glided along shore most agreeably, till the deep calm which intervenes between the land and the sea breeze, fell upon us. We cared nothing, however, for this delay. As a matter of bargain we had it not to pay for, since the time em-

ployed in sailing from port to port was not reckoned against us; so long, therefore, as the weather was fine, the sea smooth, and the plague of sea-sickness not amongst us, we felt as happy, and perhaps happier, afloat than on shore. This may seem a paradox to some persons,—to others a truism,—but to those who have the misfortune to be lame of a leg, as I was at that time, it will easily be understood how great a pleasure it was to have the advantage of seeing a new country so beautiful in itself as Sicily, close at hand, without any expenditure of bodily labour. Independently of this, it is always delightful, I think, to sail along any shore at no great distance from the beach, if the weather be fine; and I may safely say, that there are few coasts which offer more bold or varied features than the north coast of that celebrated island. Meanwhile the children scampered about the decks, and enjoyed the voyage fully as much as their active little fancies had anticipated. Indeed the whole party appeared to consider the ship as their home, and the excursions made to the shore merely visits abroad. On each return, therefore, old Nanny the goat, the chickens, and a couple of kittens, were hailed with great delight by the young folks, as domestic friends.

As we rounded the celebrated tower of Faro, and entered the straits of Messina, which, by the way, appeared greatly narrower than we had expected, we had plenty of time to muster all our classical associations, and to combine them with the still more interesting recollections of modern history in the embellishment of the landscape before us. The pilot pointed out to us the little town of Scylla, perched upon the side of a rock on the opposite coast of Calabria, but we looked and listened in vain for the no less celebrated Charybdis of the ancients. Though from what I learned on the spot about the currents in these straits, and their peculiar eddies at certain periods of the moon's age, I could well understand how the inexperienced mariners of early times should have been embarrassed and alarmed in dark, rainy, blustering nights; and how the old poets should fasten with avidity on the tech-

nical difficulties and dangers which even the professional men of these days are not ashamed to confess have baffled their art. At the same time, it is both possible and probable that, in the lapse of so many centuries, the repeated earthquakes of that disturbed district may have altered the level of the bottom in the straits, either by heaving up the ground, as we know took place in the adjacent country of Calabria in 1783, or by depressing it, as occurred at Lisbon in 1755. In either case that conformation of the bottom of the straits which gave rise to those whirlpools of which we read such fearful accounts may have been completely changed.

It is the province of poetry in most matters to exaggerate those characteristic features which it is the object of a painter to subdue. The poet loves to excite and to surprise, by bringing vividly before us combinations which are new and striking; while the painter, especially the portrait-painter, seeks to represent that which is familiar to our thoughts, and is calculated to harmonize with our ordinary feelings. It seems probable therefore that a misconception of the relative duties of these two kinds of artists, is the reason that so few descriptions of places prove on examination at all in accordance with our expectations. If there be too much imagination in the description, the original looks tame when we come to view it as it really stands; and if there be little or no fancy or poetic life in the picture, but merely a catalogue of geographical parts arranged as on a map, without the retina of the mind's eye being impressed with any definite image addressed to the imagination, the most elaborate description goes for nothing, in giving a general idea of the spot.

We had pushed on to Messina at some inconvenience in order to get there before Sunday, never doubting that in a place containing upwards of 150 English residents, there would have been some Church-of-England service, as at Naples, Rome, Leghorn, and elsewhere on the Continent. But in this we were disappointed; and our successful exertions to get out of the clutches of the Sanita gentry before Sunday, led to no good result. After our

private reading, therefore, we drove about the town to take our chance of sights, having first carefully made a bargain with our hostess of the Leon d'Oro, our Italian by this time being sufficiently fluent for bargaining and scolding, the two grand purposes for which language is required in all places where that "soft bastard Latin" is spoken. The first thing of any note on which we alighted was a garden in the centre of the city, which, as we were informed, had once been an open piazza, or square, but which was now laid out with walks, and shaded by trees, many of them of a most respectable size, though none of them had been planted more than two or three years,—such is the astonishing rapidity of growth in that delicious climate! There is nothing wonderful in all this; but what is comical enough, and characteristic of the particular part of the world is, that the good people at Messina were grievously displeased with their magistrates for having railed in and planted this open and seemingly useless piece of ground, and thus converting a rough pavement into an agreeable promenade. It seems that in all times past the inhabitants, when alarmed by the smart shock of an earthquake, which so frequently occurs, were in the habit of repairing to this open square to be out of the way of their falling houses. "Now," complain they, "the earthquakes, in spite of the magistrates, are as frequent as ever, but we have no longer a safe and open place to run to; and before the gate could be forced, or the railing climbed over, the town may be shaken about our ears, as shaken down it of course will be in due season!"

In the evening we drove, by a charmingly conducted smooth road, to the top of the high range of hills, which overlook Messina, from which we obtained such a view as few eminences in the world possess.

From northeast to southeast we overlooked Calabria, a country rugged enough in appearance to justify the accounts we had read of its frequent earthquakes, by which the ground has been upheaved, sunk down, cracked, and twisted about in the most extraordinary manner. To this part of the view the celebrated straits of Messina form the

middle distance. In the north lay the Lipari group of volcanic islands, with the restless, puffing, old Stromboli in the midst of them, which from all time has never ceased to send forth flames and red-hot stones at intervals of a few minutes. In the opposite direction, looking past Mount Etna, which seemed close at hand, we could peer far into the Mediterranean. Immediately round about us lay a tract of mountain scenery, worthy, from its dimensions and forms to be called Alpine, but, instead of barren rocky summits and cold glaciers on their sides, it was clad with vines, figs, lemons, orange-trees, and olives, intermingled with a matting of wild flowers, and myrtles, apparently the common weeds of the country.

On our way back we stepped into the cathedral, and were surprised to find an altar grander and richer in many respects than most of the tawdry, showy affairs of Rome. But the processions, of which we fell in with several, had something of a ludicrous appearance after the well-arranged pomp and magnificence of the ceremonies at Rome. The mixture of the priests with military men had a very curious effect. One procession included four regiments "pioneers and all," each accompanied by full bands of music, marching in companies along with lines of friars, intermixed with the soldiers, at the rate of two rosaries to one firelock. The priests carried lighted tapers in their hands, and the soldiers presented arms to the image of St. Pasqualli, who was escorted by a goodly company of angels, all buried in a profusion of flowers, and tottering along on a car or scaffold, borne on the shoulders of twelve sailors, who looked strangely out of place in such a scene.

Monks wear pretty nearly the same appearance all over the world, from Goa to Genoa, from Venice to Valparaiso; whereas soldiers assume a thousand aspects, under which, it is said, an experienced eye can detect their good or bad discipline, and other military qualities. I do not know if this be true; but certainly, as far as handsome, well-made, uniforms, and an upright military carriage go, the Neapolitan soldiers equal any I have ever seen, in any part of the world; and I cannot divest

myself of the idea that if properly led they might be made good fighting men. After all, dress and drilling go but a small way in the practice of real war; though when other requisites are there, such as national spirit, and mutual confidence in one another, and in their officers, they help, no doubt, to cement loose bodies of men into efficient troops when they come into action.

We made a considerable change at Messina in the plan of our voyage. Our intention had been to go from thence to the adjacent port of Catania, which lies at the foot of Mount Etna, in order to attack that mountain without loss of time. But I found, to my great mortification, that my rheumatic leg was still unfit for such active operations; and therefore, in order to give time for things to mend, it was decided that on leaving Messina we should go straight to Malta, pay our visit there, then return to Sicily, proceed to Girgenti and Selinuntum on the south, coast back to Cape Passaro, and so round the southeast corner of the island to Syracuse, on the way to Catania, thus making Mount Etna the last part of the Sicilian expedition. I hoped, in this way, to have a fortnight or three weeks in which to regain strength for the ascent of the mountain, which I had often heard was rather a formidable undertaking in the way of fatigue.

Generally speaking, it is a bad plan to leave any thing of this kind to be done at the end which might be executed at the beginning of the expedition. On the present occasion there was no help for it, and I made up my mind accordingly. For the rest, it is useful to recollect that in every journey very many objects which might yield us pleasure or profit, or both, must inevitably be passed without examination. I have even heard it said, and I think with truth, that one of the most useful secrets in travelling is less to discover what is worthy of being seen, than to determine what we can best afford to give up, in order to have time and strength for those first-rate objects which require our fullest attention.

We embarked in a great fuss and hurry on the morning of the day appointed for sailing, under the assurance,

and with the expectation, of being off immediately. But the abominable people at the health-office could not be made to stir. Our captain, too, in a like manner, dropped astern, and failed to get his papers before noon, at which hour the Sanita office was shut. The consequence was, that although we had been hustled on board, at great inconvenience to ourselves, at 11 o'clock, we had to wait till half-past 5 before we could budge; and all, literally, for nothing which might not have been done in five or ten minutes by any ordinary man of business in any other part of the world, always excepting Spain and the countries formerly under the dilatory sway of those most easy-going of mortals.

What added vastly to our provocation was, that the wind, which at first was quite fair for us to get out, gradually hauled round till it blew right into the port. This rendered it necessary to work or "beat" out, as it is called; a simple process in a ship well manned and well handled, but one which, in so narrow a navigation, is attended with risk where all the parties concerned are not entirely up to their business. I certainly had imagined that no man in the kingdom of the Two Sicilies was more likely to execute such a manœuvre in good style than Don Giovanni, our captain; but this, however, was not the opinion of an English gentleman who happened to come on board with some letters for Malta, just as the anchor was "heaving a wash," and the sailors were busy "hooking the cat."

Our English friend having stept aft on the quarter-deck, thrust his head into the binnacle, looked aloft at the wind, and having cast his eye round the curved, sickle-shaped bay, commenced a dialogue with the captain in Italian, which may be thus translated—

"Hollo, master of mine, unless you are a deuced deal smarter in your movements, your sails more briskly set, and your craft a little better handled than I see any present prospect of, you will never get out of the bay this evening."

"Leave the vessel to me, if you please," said our captain quietly, and not very well pleased at the intrusion.

"Leave it to you, indeed," exclaimed the stranger; "that would be a very pretty story! Why we should have your craft ashore in a jiffy. No! no! give me the helm, my friend;" and suiting the action to the word, without more ado he caught hold of the tiller, slipped it out of the astonished captain's hands, and gently pushed him out of his way.

"What do you mean?" said Don Giovanni, assuming the port of Mars.

"Mean!" cried the other, "I mean to show you and your slovenly crew how to work a ship out of the port of Messina as she ought to be worked! So, pray, my good friend, do go forward and get the anchor to the cat-head as quickly as possible, and set two or three fellows to hoist away your fore-topsail. Come! away with you, my worthy capitano; don't you see how we are drifting down on the shoals, with the sails flying about like so many pudding-bags!"

If the captain was amazed with this free-and-easy assumption of the command of his vessel, I was still more perplexed, and though highly amused with the novelty of the scene, I could not quite approve of my officer being superseded without any process of inquiry; so I edged up to the Englishman, who by this time was in full cry, trimming the sails, luffing up, and bearing away, as the passage required, and ordering the men about in a tone so authoritative that it secured immediate obedience. I said to him, though not without laughing at the absurdity of the whole affair, "Had you not better leave these matters to the worthy captain of the vessel; for I don't see by what possible right you can interfere with him or his ship?"

"Oh, sir," replied he laughing, "you don't know these Neapolitans so well as I do. I have been knocking about here these twenty years and upward; and having sailed a far bigger ship than this round and round these islands, I know the difficulties of getting out of this very awkward corner so well, that I am sure if I leave you to the care of your worthy captain, as you very properly call

him, there is not the least chance of your getting clear of the land to night."

"But how will the skipper like all this?" I asked. "No one approves of having the reins taken out of his hands perforce, as you have taken his tiller."

"Like it!" cried the intruder; "look at him there; don't you see he has already got the anchor a cock-bill, as I told him to do; only observe how he is lugging away at the jib-sheet with his own hands!"

"Ready about there! round she comes!" exclaimed the new commanding officer with a loud voice. And so he went on, first making one tack, and then another; sometimes keeping off the wind, and sometimes shaking the sails; and all with a degree of precision in his piloting, and a smartness in the seamanship, which drew a ghastly smile even from the compressed lips of the superseded chief. The sailors, indeed laughed openly, and jumped about the decks with a degree of activity such as we had not witnessed before during the voyage. Once or twice the captain made a humble sort of attempt to suppress the mutiny, and regain possession of his own quarter-deck; but he was constantly remanded to his new duties, by an order thundered forth by the usurper, delivered in such a voice that even we, the independent passengers, were glad to keep "abaft the binnacle," out of the way of the men who were working the braces. What added to the absurdity of this strange scene was, the mirth of two or three other English and Sicilian gentlemen who had accompanied the new commander on board. They came merely to take leave of us; but knowing their companion to be a bit of a humourist, and a skilful seaman withal, they did what they could to encourage him in his very effective, but not a little ridiculous proceedings. The seamen, too, catching the spirit of the jest, joined them, and all of us, in a loud laugh, in which, at length, though much mortified, the poor captain himself was obliged to join.

"Oh now, my good fellow!" called out the Englishman, "that's the proper way to take such an act of friendship as I have done for you in time of need. Here,

old boy, do you take the tiller once more into your own worthy hands; keep the sails rap full; give that point under your lee a wide berth; don't bear up too soon; and you'll be presently in the middle of the straits. When you get there you will have time to thank your stars that you had some one to work your brigantine out of the harbour of Messina; a job, let me assure you, which you never would have accomplished yourself. Good-night to you sir!" and shaking him and us by the hand, he leaped into his boat, wished us all a good voyage, and left us to our fate.

During the night we had such light winds that when the day dawned we were still scarcely out of sight of Messina; but in very good time to see the sun rise on Mount Etna. The first light which caught his hoary top showed us that the snow, which we had previously supposed wrapped it entirely, did not extend to the highest peak, where we had supposed it most likely to be found. In strictness, therefore, the very top is not hoary, but black; an effect either produced by the steepness of the cone, which will not allow it to lie upon its sides, or by the volcanic warmth of the ground, which melts it as it falls. Even that enveloping the region of the mountain lying next below the cone appeared to our eyes to be thinly sprinkled in comparison to what we had been accustomed to in the higher Alps. At all events, on the eastern, or Val del Bove side of Etna, we looked in vain for those solemn masses of eternal snow which, if I may so speak, appear indigenous to the Swiss mountains, and, as it were, flourish in the Alps in perennial luxuriance. On the contrary, the scanty snows of Etna present an exotic appearance, as if out of place and out of character either with the climate of the Mediterranean generally, or with this volcanic region in particular.

The gentleness of the slope of Etna, as I had been well prepared for it, did not surprise, nor displease me, as it does many people, who expect to find not only a lofty but a steep mountain. When people first see it, and find the slope so gentle, they can scarcely credit what

they have heard of its being nearly eleven thousand feet high.

We soon left Mongibello astern, and gliding past Syracuse, found ourselves in the middle of the Mediterranean. But the children were rather disappointed to find that as we made Malta before losing sight of Sicily, they could not say they had been really and truly out of sight of land. If every proper nautical exertion had been made, we ought to have entered the celebrated harbour of Valetta shortly after sunset; but it was not until after midnight that we came close to the port, and not until past one in the morning that we anchored.

The moon being nearly at the full, we ran into the harbour with almost as much confidence as if it had been noonday. Nothing could be more interesting either in a professional or in a picturesque point of view, than the entrance to the harbour of Valetta, which is so narrow that a ship almost rubs sides with the rocks, and yet the channel is so deep that the largest three-decker has ample water between her keel and the bottom. We carried but little wind in with us, and that being only aloft, the surface of the sea became quite smooth, but the swell of the Mediterranean extended far in, and glancing back the moonlight from the top of the long glassy ridges, which, as they passed upwards, set in motion all the shipping at anchor, so that their masts, from being stiff and upright, became inclined at all angles to one another, like a set of nine-pins made tipsy. As the harbour narrowed, the waves crisped and broke along the shore, by the slight additional impulse which we gave them; and this brought a new feature to the landscape, for this slight splashing among the rocks was literally the only sound to be heard, all the rest of the world being asleep. It might have been thought that the huge ranges of batteries upon batteries, raised by the ancient knights of Malta, and strengthened by the science of modern war, had been entirely abandoned, for not a soul was to be seen, and only here and there a gun peeping from an embrasure. At last we detected one sentinel, pacing quietly among the works; and the glitter of even a single bayonet was quite enough to tell what lay behind.

We are apt to be impressed with somewhat similar feelings the first time we pass under the walls of the sister fortress Gibraltar. As we look at the pile of cannons extending from the water's edge to the sky-line of the rock, we ask ourselves how many of these guns will be brought into actual use? I remember propounding this question to an old bombardier who showed me through the endless galleries of that wonderful rock: he replied with a smile, "Not one!" adding, "they are not the less useful on that account, sir."

Something of the same kind may, perhaps, be said of our Mediterranean fleet, to get a sight of which had been one of our principal objects in going to Malta; and certainly never was any mortification greater than ours, on finding that the admiral, Sir Josias Rowley, had sailed but a few days before, taking all the ships with him to the Levant! One disappointment followed another; for on landing, and hoping at all events to see the admiral-superintendent, a very old and particular friend of mine, he, too, we found, was flown,—gone off only an hour before, to the island of Gozo, which lies to the west of Malta. Finally, on going to the government-house, we heard, with great sorrow, that the governor and his family had just set out for the country, in consequence of a heavy domestic affliction. The mainstays of our hopes of enjoyment at Malta being thus cut away, we had well-nigh re-embarked and sailed back again for Sicily.

CHAPTER II.

TRIP TO THE ISLANDS OF MALTA AND GOZO.—ON THE OUTPOSTS
OF THE BRITISH EMPIRE.

No mortal who has not had actual experience of the fact can have any correct notion of the delight of making the transition from the dirty, piggish, lumbering, scrambling manner of getting on in Sicily, all at once to the cleanliness, plenty, and above all, the elegances of the English style of living. I never remember, in the many times I have made similar jumps before, from one state of things to another, enjoying more completely the charms of refinement in manners than I did in landing on this occasion at Valetta, the capital, and the pride of Malta. It is not very easy, however, to describe in what the difference consists, for it is chiefly made up of things which, when taken separately, are very insignificant, but which all conspire to minister to our comfort when taken together.

We had not been long established in our comfortable quarters before our acquaintance began to swell, partly by the renewal of old relations, and partly by tying fresh knots. I walked up to an officer holding a high civil situation, for whom I had a letter, and found him a most agreeable person indeed, hospitable withal, and anxious to render us service. Meanwhile an old London friend of some standing called, and made us promise to dine with him on next Tuesday; then the commanding officer of one of H. M.'s regiments came to introduce himself, and to engage me not only to dine at the mess on Friday, but to request I might consider myself an honorary mem-

ber as long as I stayed at Malta. I felt, indeed, and said, that as a water-drinker I must prove a most unworthy member of a mess where, if the reports I heard were true, champagne and claret flew about as if they were squirted from a fire-engine.

In dread of these rapidly accumulating engagements, and being very anxious to visit an old friend and brother-officer, who was then living at the adjacent little island of Gozo, I resolved to set out for that place at once, before the proverbial hospitalities of Malta should render such a move impossible. Accordingly, we got up at three o'clock next morning, with the intention of starting in a boat we had appointed to meet us at four. But owing to some mistake on the part of the men, or some misdirection on ours, or possibly merely the sleepyheadedness of the Maltese rowers, we were obliged to sit for half-an-hour on the bare rocks at the sally-port before we commenced our voyage. A half-hour, however, was never more agreeably passed, for we enjoyed a view of Mount Etna during the whole of this period, although the distance from the spot where we were seated to the top of that mountain is, according to Captain Smyth, about one hundred and thirty statute miles. During part of the twilight, the edges of the cone, and of a considerable portion of the sides, were projected on the clear sky behind with the most remarkable distinctness.

After the sun rose, about five o'clock, by which time we had got out of the harbour, and were rowing along shore, Mount Etna gradually disappeared in the haze caused by the heat, which soon became excessive. Being in a light boat of the country, rowed along the northern shore of Malta by four stout hands, we reached the landing-place at Gozo, a distance of fourteen or fifteen miles, in three hours and a half. On our way we looked into "St. Paul's Bay," a small bight or cove, which tradition says, and all the Maltese world believe, is the place where that Apostle was shipwrecked. For my part I see so little reason to distrust the account, that ever since that time, when I have read the history given in the Acts, I have been carried back in imagination to

the spot, and fancied I could point out the exact rock on which St. Paul stood when he shook the viper from his hand.

I found the brother officer whom I had been in search of living with his wife and family at Rabatto, the capital of Gozo, which lies nearly in the centre of the island. They had breakfasted long before we arrived, but they soon knocked up a plentiful meal for us, in the true Indian style, which reminded me of the times long past when he and I had served in that country together. A row of fifteen, followed by a walk of two miles, and a drive in one of the rather savage caresses of those islands, furnished exercise enough to sharpen more languid appetites than ours. We then sat discussing old times till dinner was served, and again till there remained barely daylight enough to see our way back to the boat. We managed, however, to take a look at a singular work of unknown antiquity, and equally unknown purpose, composed of those huge blocks of stone which characterize the architecture of remote periods, when, as we suppose the mechanical arts were in their infancy, we wonder how such masses could have been moved, or why they have been moved.

These little islands, though certainly not destitute of cultivation, are quite destitute of general verdure. In all the ravines, or what are called the valleys, we were told vegetation was to be seen at certain seasons of the year, and that nothing can exceed the richness of the gardens. I can only say, however, that in the month of May at least, of all the scraggy, calcined, dusty-looking places I have ever seen in any part of the world, Malta, Gozo, and the little island of Comino, which stands between them, bear off the palm for apparent sterility. The island of Ascension is no doubt a great deal more desolate than Malta, but it is so decidedly volcanic, and bears such evident traces of recent eruptions, that its story is told at the first glance. It pretends to being nothing more than a heap of scorixæ, streams of lava, and cones of ashes. Whereas Malta, with its fortifications, palaces, and gardens—its historical recollections,

its knights, its sieges, and battles, lays claim to something more; and we are proportionately disappointed to see such a fire-brick-looking place as it is.

In the midst of such a scene it is not a little interesting to remark, how naturally the English, wherever they go, contrive to carry their comforts with them, and are so essentially well ordered as to be always ready to receive company without any warning. In the remote island of Gozo, for instance, when on our way back to the boat my friend called to introduce us to the officer in command of the troops—eight-and-twenty, I believe, in number—we found, not the governor, as it happened, but the ladies of the family, as neatly dressed, and quite as ready to receive company as if, instead of living in a perfect desert, with many thousand chances to one against any visitors coming upon them, they had been residing in the most gadding street of the busiest watering-place, where visiting was the sole occupation.

At Valetta next day we dined with one of the most agreeable persons in the world, a gentleman well known in the world of letters and diplomacy, and who, though he might command the best society in London or Paris, and would be gladly received in either as one of its most accomplished members, chooses, from a love for the climate to expatriate himself to this distant spot. But in truth, a person of this stamp can never be said to expatriate himself. The wide world is his true country; and though the range of any human benevolence must be limited, there is no reason why the circle of so good a man's influence should be smaller at one place than at another. When, therefore, we regret that the society of such a person is lost to us at home, we should recollect how much more severely his loss would now be felt on the spot which he appears to have selected for the rest of his life.

After all, Malta is not a bad place for any one to take up his quarters who wishes to know what is going on in the world; and especially since the introduction of steam navigation; for it is charmingly central, lying half way between western Europe and the Levant. The

mails, too, from England, across France, as well as those coming by the Bay of Biscay and Gibraltar, call at Malta as a matter of course; and likewise on their return bring not only the freshest news from Turkey, Greece, Syria, and Egypt, but give the earliest accounts from India and China. The same causes bring a perpetual round of company to Malta; so that a resident there who, like the gentleman I spoke of, has the means of keeping what is called an open house, has a taste for good company, and knows how to profit by the occasions perpetually presenting themselves for making new and instructive acquaintances, could scarcely pitch his tent in a more advantageous spot.

We had intended to embark on the 30th of May, on our return to Sicily, having been fêted to our heart's content, and seen every thing we thought was to be seen; but the wind blew freshly from the north, and as we were free agents, we requested our captain to furl his sails again, and to hold on till the breeze lulled. It was fortunate we made this resolution, as it gave us an opportunity of seeing more of the interior of the island than we had ever dreamed of; for the good people there, as in other places, thought only of showing us the sights immediately at their doors, and were apt to consider the hospitalities of the table as paramount to any other attentions.

On casting about for some occupation to fill up the interval between our being perfectly ready to start and the moment of the sea-wind falling, it was suggested by an obliging friend that we might visit the ancient capital of Malta—Citta Vecchia, distant only six miles. The same kind person lent us a calesse, a queer, rumbling, very shaky, one-horse conveyance, in use, fortunately, nowhere else in the world. It somewhat resembles a gig, but still it is a very different thing. It may be described as a very small post-chaise, or, more nearly, a large sedan chair, on two shafts, between the foremost ends of which is placed the horse, while the other ends are inserted into the axletree of two carriage-wheels; thus the body of the calesse is not over the wheels, as in

the case of a gig—and merciful it is that it is not—but lies between them and the horse. Relief from springs there is none, except what results from the elasticity of the shafts. The driver always runs by the side of his horse; and as the streets and roads are exceedingly rough, the bumping and shaking to which passengers by this rudest of vehicles are exposed, have no parallel that I know of except in an American stage on a corduroy road. What is even more disagreeable than the jolting of the calesse in actual progress, is the wretched period when it is said to be standing still; not only are any rough motions of the horse multiplied by the leverage of the shafts, but his smallest inclinations to the right or left jolt you from side to side: his impatience under the bite of a gnat almost pitches you out, and even his breathing is felt; in short, the slightest tremors are all transmitted by the position of the body of the carriage to the unhappy passengers. It is the oddest fact in the world that the inhabitants come to like this mode of conveyance, or to say they do, and perhaps to persuade themselves into it; just as people who have resided long in Germany come to fancy they like the horrid close stoves and tobacco-pipes of that smoking, but otherwise charming, country. I do not think, however, that any extent of experience would bring me to like the Maltese calesse; and I rather suspect that the cunning native drivers are secretly of this opinion, too; at all events, no consideration will induce them to mount the shafts, however fatigued they may be.

A lady told us that on first coming to Malta she could not bear to see the driver running all day long in the sun by the side of the horse; and that after repeatedly suggesting to him to get up, she desired him to stop, and insisted upon his seating himself upon the shafts. The fellow declined, at first respectfully, but on her still further urging him, he fairly got angry, and, feeling himself insulted, declared he would not only leave her service, but leave her to shift for herself on the open highway, if she required him to do any thing so very improper. I remember hearing of a spoiled child in

England who insisted upon his friend Thomas the footman, being transferred from the hind dickey to the inside among the ladies! Nor do I suppose Thomas's sense of propriety could have been more outraged by such an invitation than that of the calesse driver's at Malta, when desired to take a seat on the same level with his mistress.

Although the day was fiercely hot, and the glare from the white ground exceedingly annoying, we made out our journey to Citta Vecchia very pleasantly; saw the cathedral, the catacombs, and, lastly, the identical cave in which St. Paul lived for three months after his shipwreck. A church, of course, has been built over the spot; and the guides are quite in earnest in all they say about it; but somehow we wanted faith in this particular; though there is no doubt that Malta is the Melita of the Acts, not merely from the similarity of the name, but from the details of that most interesting of voyages.

What interested us, I think, most of all, was the astonishing and totally unexpected fertility of the country, in the absence, or almost total absence, of verdure. The rock, as I have already mentioned, is nearly white, and so is the soil produced by its decomposition. And as there are few trees, fewer shrubs, no hedges, and scarcely any grass, the only traces of green which the eye can discover lie in the gardens in which the vegetables and fruit are cultivated for the table. All the rest is a blank, to appearance, or rather to first appearance; for when the country comes to be more attentively examined, it is found to consist of innumerable well-tilled fields, inclosed by low, dry, stone walls, or what we call dykes in Scotland. Moreover, the whole of that part of the island which lies near Valetta, as well as that round Citta Vecchia, is studded with towns, villages, and single houses, indicating a dense population. Most of these towns are rendered striking to the eye by the Moorish form of the churches, and by the houses being flat-roofed, with tops generally ornamented by balustrades over well-shaded balconies and richly-carved window-frames.

Unless we had made this little supernumerary expedi-

tion, we should have come away without any correct notion of the country; nor should we have been disposed to believe, as we now do, that in March and April, when the corn is green, the fields become not only verdant, but very rich and pleasing to look at. At the time of our visit—the end of May—the greater part of the crop was cut down, and the remainder, partly from its ripeness and partly from the powdering it gets from the dust, having assumed the colour of the rock, was undistinguishable from it. Before we got back our eyes had become sore, not only from the action of the glare, but from the minute dust flying about—an evil which I have been told is apt to cause serious injury to the lungs of persons otherwise delicately constructed in that tender part of the human frame.

Upon the whole we left Malta, I think, with as much regret as we parted from any other spot during our journey. The people, one and all, with whom we had any intercourse treated us not merely with attention, but with kindness. But besides this, Malta has special recommendations to any one who prefers English manners and customs to those of any other country. I have before had occasion to remark, in describing the English Protestant chapels abroad, that it is the good fashion of our countryfolks, go where they may, to carry with them, as far as may be possible, those refinements they have learned to appreciate at home. And as they generally have the taste and the skill, as well as the pecuniary means, to ingraft upon these homespun comforts, the conveniences peculiar to the climate in which they may be resident, the combination becomes very delightful, and greatly alleviates the inevitable privations of their banishment.

. Were I to change the habits of my past life, and become permanently fixed anywhere, I should prefer England, certainly, with its occasional disadvantages of climate, to India, Sicily, or anywhere else, whatever might be the local charms of each due to its latitude, or its domestic, or its political circumstances. But for a transient visit, such only as it has been my fortune to pay to

most places, I must say that the attractions of Malta are greater than I have found almost anywhere else. For we find united in that spot many of the luxuries of a warm region, with most of the substantial comforts of English manners. The steam-packets, even at the time I speak of, (1834,) reached the island from England in fifteen or sixteen days, but now that the voyage has been reduced to ten or twelve, it can scarcely be considered a distant spot. There are generally four regiments at Malta, for which reinforcements of men and officers are constantly arriving; and it is also the head-quarters of the Mediterranean fleet. Now, in order to keep up these forces, regiments and ships are continually arriving from home. Besides which numerous persons belonging to the civil establishment, with their families, land in like manner at Malta, after only a fortnight's voyage. The influence of all these constantly-recurring recent arrivals of persons all fresh from England, without their having run the gauntlet of the Continent, is very remarkable. The question is not, which is best or which is worst,—England or the Continent—but merely which of these two very different kinds of manners are to prevail. At Paris, Rome, Naples, and other capitals abroad, where the English are in the minority, we find, even among them, a strong dash of what we call foreign habits and ways of thinking; whereas, at Malta, where the English not only predominate, but where the supply is hot-and-hot from home, we find that their genuine tone of manners and customs, of thoughts and sentiments, is kept up in a manner which belongs to none of our other settlements to the same extent: and in only a few of them in any degree approaching what is the current fashion of Malta.

At Halifax, in Nova Scotia, and for similar reasons, something of the same kind is observable. Still the proximity of that provincial capital to the United States, and the inevitable intermixture of republican habits, both of thought and action, take off some of the polish above alluded to.

Gibraltar has considerable merits in its way, too.

Perhaps it is too exclusively military, as it is certainly too small for comfort, being after all only a huge fortress. The intercourse it keeps up with their stately, but thoroughly well-bred neighbours, the Spaniards, contributes materially to tinge, and not unfavourably, the manners of the spot. I speak, of course, of the mere external manners, in the narrowest sense of the term, for in essential matters the benefit of the example, so far as it may be supposed to go, may be doubted.

Bermuda and the Cape of Good Hope have respectively considerable recommendations of their own, especially in their equable and essentially temperate climates. Bermuda, however, lies somewhat out of the way, and has, therefore, far too little intercourse with the mother country, to derive sufficient instruction in its manners, which are, therefore, quite peculiar. We speak of a language being a jargon, formed out of several others, such as *Lingua Franca* of the Upper Mediterranean and the *Hindustanee* of India, and by analogy we may talk of the manners of a place being a sort of jargon compounded of the habits of various others. Thus, at Bermuda, there is perceptible a considerable dash of the languid, semi-luxurious style of the adjacent West Indies, without their riches, and without the tropical ardour of the climate. This indolence is curiously modified by a touch of the American activity and recklessness in the pursuit of gain, which, however, is, in its turn, partly counteracted by the more scrupulous habits of the parent state. It is certainly much to be regretted that more pains are not taken to keep up the English rather than the transatlantic intercourse, seeing the vast importance of which Bermuda will become should we again, unhappily, be engaged in a war with the United States. The enormous advantages of possessing the cordial sympathy and co-operation of the natives, in the defence of any country, are well known to every one who has served in places where war is carried on. On this principle it becomes of the greatest consequence to give, as far as possible, an English character of thought, action, and sentiment to the inhabitants of those three great outposts,

Malta, Bermuda, and the Cape, and to assimilate, not merely their manners to ours, but to render their interests identical with those of the mother country. It is strongly alleged that we neglect these points too much, and that we injure our political authority, and lessen our security in war, especially at Malta, by sharing the good things too little with the natives. They are a docile and amiable people, very willing to be led into our ways and to assist us heartily in seasons of danger and difficulty. But they are sensibly alive to the neglect, amounting, I have frequently heard, almost to disrespect, in which we allow some of the richest and best born of the native inhabitants to remain, while more favoured English, without superior claims on the score of talents and character, are preferred before them.

In the present piping times of peace, plenty, and security, it may seem of little consequence what the native inhabitants of Malta, rich or poor, think of us. But in the event of a war of such importance and activity as to threaten an invasion of the island, the sincere good-will of the population would become of vast consequence. Malta has a low and accessible coast all round, and is such that an enemy, unopposed by the people, might land at an infinitely greater number of points than could by possibility be guarded by troops. A hostile army, therefore, might effect a landing in spite of a very large garrison; and supposing the fleet to be employed elsewhere. The magnificent fortifications of Valetta would, no doubt, keep off besiegers for a long time, and if the access to it by sea was open, it might resist almost any force. If, indeed, we continued to possess the command of the sea, we might be able to cut off their supplies, and otherwise harass, and perhaps drive away an enemy who had landed. Still, even in this course of operations, the real good-will of the people on our side would prove of far more importance to us than any other description of alliance. It is, therefore, consistent with the soundest policy to establish, in good faith, that principle of conciliation which alone is likely to be effectual. I mean that which

is based on a fair consideration of the feelings and interests of the native population.

The same reasonings apply perhaps with still more force to Bermuda, from the geographical and political circumstances of the case being somewhat different. In the first place, what we call Bermuda is not a couple of islands, like Malta and Gozo, but a group consisting, it is said, of as many separate islands as there are days in the year; and as each and all of these are accessible, they offer to an enterprising enemy innumerable points upon which he might easily form a lodgment, if aided by the good-will of the natives. In the second place, the proximity of the United States, and the proverbial energy of the American sailors, together with the admirable nature of their nautical capabilities as to shipping, and other means of annoying the Bermudas, furnish most cogent arguments for our maintaining a hearty feeling of national good-will towards us on the part of the inhabitants of those islands. Let the least experienced person that ever thought of war, much more those who have mixed in it, only consider with what different degrees of advantage the swarms of American privateers—not to speak of regularly-equipped armaments—would invade Bermuda, if the inhabitants were cordially with us, or were cordially with them! Let us never forget how the unfortified town of Buenos Ayres repelled a regular army of British troops, solely by defending each house separately. The inhabitants were to a man against us, and having shut themselves up in their insignificant dwellings, rendered them so many impregnable fortresses. Equally impregnable would Bermuda be, if, should it be attacked, we shall fortunately have succeeded in making the inhabitants heartily our friends. If they be gradually rendered, by the agency of good services, thoroughly English in their feelings, and be brought by means of direct steam communication into as frequent intercourse with their parent state, as they now are with the alien states of America, we may defy the attacks of any enemy, in the event of a war, even if our garrison there should con-

sist of only a few troops. But if we fail to give them this national character, there is probably no purely military force which this country could spare that could effectually hold possession of that most important position, on what has been well called the frontier of the Atlantic.

Similar reasonings, though different in degree, and varied by the peculiar circumstances of the case, apply to the Cape of Good Hope, and still more forcibly to the Isle of France. At the Cape there is still a strong leaven of the Dutch rule, which it may be greatly to our interest to conciliate, and I believe there is no great difficulty in accomplishing this purpose, so essential not only to the prosperity of the colony in peace, but to its security in war. At the Isle of France the difficulty appears to be much greater; and for reasons which, from being inherent in the nationality of the two parties there, it may be very difficult to remove; for, in spite of all that the march of intellect has accomplished, it is to be doubted if its effects have been considerable in reconciling us to our nearest neighbours, or they to us. It has been said, indeed, that the two countries are now so fully alive to their mutual interests, that an interchange of goods and of good offices, if continued for a sufficient length of time, will gradually substitute national friendship for national enmity, and if so, that the influence of this improved understanding at head-quarters may be expected to extend to the Mauritius. I hope it may; but I cannot help thinking of Lower Canada, and much fear that nothing short of the swamping process will ever be effectual in either case.

Before quitting this subject it may not be without its use to consider the position which England holds for the good of all nations, fully as much as for her own, as the trustworthy possessor of a regular chain of political and military redoubts, nearly round the globe. First, there are Heligoland, near the entrance of the Baltic, the islands of Guernsey and Jersey, at the mouth of the Channel, and Gibraltar, at the entrance of the Mediterranean, which fortification, taken along with the similar

fortress of Malta, and with the Ionian Islands, may be said to command the navigation of the Mediterranean. Then follow Newfoundland, Cape Breton, Halifax, Bermuda, and the West Indies, on this side of the equator; and on the other, Ascension, St. Helena, the Cape, the Isle of France, Ceylon, Singapore, New South Wales, Van Diemen's Land, and, more recently, New Zealand. It is probable that we shall soon also have a fixed military position at Chusan on the Coast of China, to complete our communications, and not ours only, but those of every other nation whatsoever.

For, we may ask, in what other hands could these great national outposts be as safely entrusted? If Gibraltar, Malta, Bermuda, the Cape, the Mauritius, and Ceylon, belonged to any other country but England, is it not more than probable that the command which they give of the navigation of the seas in which they respectively stand, might prove a tempting motive to mere war, whenever other circumstances should conspire to give that impulse? But who ever dreams of England taking any such unfair advantage, merely from her holding such power?

A series of highly interesting and valuable papers on this subject have lately been written by Lieut. Colonel Wilkie in the *United Service Journal*, the ablest professional publication, in my opinion, that has yet appeared in this country. They are entitled "The British Colonies considered as Military Posts;" and although the view which this accomplished writer takes has more of a military tendency than a political bearing, which was my chief purpose in this discussion, I am happy to find all my ideas not only confirmed by his details, but greatly expounded and generalized. The numbers of the *United Service Journal* in which these articles have appeared are 139, 140, 143, and 144.

CHAPTER III.

GIRGENTI IN SICILY.

WE re-embarked in our pretty little brig at five o'clock in the evening, covered with dust like millers, and half choked with the impalpable powder of which I have already spoken as proving so noxious to delicate subjects. We, however, being any thing but delicate subjects, sat down to a famous dinner prepared by the neat-handed Giuseppe, which, in anticipation of the swell outside, we demolished while the water was smooth and glassy. The captain meanwhile having gotten his anchor up before we came on board, with a degree of foresight wonderful for a Neapolitan, pulled his vessel off to a great buoy in the middle of the harbour. As soon as we had dined we gave the word to slip the hawser and make sail; the light wind fanned us out, and we bade adieu to Malta on the last day but one of the month of May, 1824.

The wind did not treat us well either in the night or next day, and my party, young and old, lay prostrate on the deck, which the worthy skipper compared to a field of battle. For my part, though generally very sea-sick under such tossing circumstances, I felt so rejoiced to have regained the power of walking, and with that power the prospect of being able to undertake the ascent of Mount Etna, that I cared for little else. I think I have omitted to mention that on reaching Messina I was as perfect a cripple as any one of the melancholy objects who in most Italian and Portuguese towns are allowed by the police to spread about the streets in order to exhibit their misery to the best advantage, the purpose being to work on the feelings of the passers-by, and thus to relieve the public burthens by private charity. The exhibition—which I could not help—of my lameness had the good

effect, however, of exciting the attention of a very able medical man, belonging to the East India Company's army, who, on his return from Calcutta overland, had been so much pleased with Sicily, as, fortunately for me, to pitch his tent there for the rest of his life. Having served in a part of the East particularly subject to rheumatism, he had studied the complaint in all its forms; and no less to my surprise than joy, he succeeded in half an hour, merely by an adroit process of bandaging, to renew most of my strength; and in a few days my health entirely. I cannot describe the feelings with which I viewed the top of Mount Etna before and after this process! Before the cure I had looked at the summit—on the Fox and Grape principle—with far more bitterness than satisfaction, from fearing that I should never be able to reach it; but after regaining the faculty of locomotion, I felt as if it were an affair of a few hours' scramble up. The task, indeed, did not prove so easy, but still I made it out.

The wind hung to the westward so provokingly, that on our stretching over from Malta to the south coast of Sicily, we could not fetch Girgenti,—the Agrigentum of the ancients,—the port we were bound for. During the whole of Sunday also, on as magnificent a first of June as ever was seen, we kept beating along shore, with the breeze dead on end, and a head sea, which greatly disturbed the internal economy of the passengers. We were much tantalized, too, with the sight of the highlands over our port; and later in the day with a distinct, though distant, view of the temples which have obtained for that place a celebrity of between two and three thousand years' date. Towards evening, as usual in those seas, the wind fell light, and it was not until late at night, and in the dark, that we anchored inside the mole of Girgenti. The town itself, which is about four miles distant, we saw during all the afternoon, encrusting the top of a hill, much after the fashion of those on the Col de Tende, and all very striking and picturesque. The country, after Malta, looked like a garden; but here may be observed an important distinction. Malta, though it appears like

a desert, is made, by the industry of its inhabitants, in the highest degree fertile; while Sicily, though essentially a paradise, is made virtually barren by the indolence of the natives.

The next day turned out a busy and chequered one with us. As we had entered the port in the dark, it became a matter of much curiosity to look round us when the day broke, and to examine into our novel position. We found ourselves snugly moored, head and stern, the latter, that is, our latter end, or poop, being tied to the wharf, near the end of the mole, while the former, that is, our foremost end, or bow, was kept out by a cable bent to an anchor, which had been dropped in the middle of the small, artificial port embraced by the mole. The adjacent country consisted of bare, white cliffs, changing to a yellowish brown towards their western extremity, and capped by still more yellow strata, which again were crowned with trees, and many corn-fields, some almost ripe and ready for the sickle, actually under its touch, and some scarcely turned from the green of spring to the mellow tint of this early harvest. On the top of the ridge overhanging the port, or marina, stands the lighthouse which had guided us in, and there it—or something of the kind more or less rude—has probably stood since the times of the Punic wars—*vide* Polybius. Near the end of the dirty, straggling, fishing village, dignified with the name of the seaport of Girgenti, our captain pointed out to us an immense quantity of sulphur, not the rude sulphur of the geologists, but the brimstone of commerce, prepared for embarkation, in cakes about a couple of feet long by eighteen inches wide, and five or six inches thick, piled on one another with such regularity as to be easily counted. I dare say I saw enough to load half-a-dozen ships withal; but little thought of the political commotion of which, in all probability, these very cargoes were afterwards the cause. I thought only of their volcanic origin, and cast my eyes to the right and left for the traces, which were numerous enough, of their geological history.

While I was speculating on these formations, groups

of the natives—fine, tall, muscular fellows, with short trousers rolled up to their thighs, were employed as busy as Sicilians ever appear to be employed about any thing, in carrying loads of this precious material on their shoulders, exactly as our Edinburgh porters carry coals, and depositing it in great launches, or boats, which could not approach the shore nearer than 150 yards, by reason of the shallowness of the water. This leads me to mention an interesting geological fact, namely, that owing to the loose nature of the materials forming the cliffs in the neighbourhood of the port of Girgenti, the harbour is constantly filling up, and it costs the people a great deal of trouble to keep it clear, by excavating the sand and silt washed down by the rains. I could perceive a broad belt of white water, fringing the sea, to the extent of a mile from the shore, under which a shoal must be gradually depositing itself along the coast, which will one day be dry land.

Fain would we have leaped on the wharf, and taken advantage of the fresh air of the early morning for our excursion to the temples, but this could not be, for until that purgatory of the Mediterranean, the Sanita, had been passed through, we were as much prisoners as if we had been convicts on our way to Australia! So we waited with great impatience hour after hour, and after all were very near being subjected to a still longer period of durance, for at seven o'clock we were suddenly told that the health-office people were ready to examine us, and that unless we hurried our dressing operations, and took these arbitrary folks at their exact hour, they might turn about and leave us till their midday visitation. About half an hour before this critical moment a friend of our captain's came down abreast of the ship, and offered his services to assist us in any way. So we hailed him, and begged him to send up the hill to Girgenti for three letigas, and to be very particular to give directions for a good breakfast to be prepared for us. How little, alas! after our experience of Italy and Sicily, did we appear to know of the habits of these people when we trusted to such arrangements being made by proxy,

on a matter of such vital importance to the success of an expedition. It did occur to me, indeed, that it would be more prudent, on Dugald Dalgetty's principle, to secure a comfortable meal before starting for the interior of Sicily; but the richness of the scenery was so inviting, and the air so deliciously cool, we could think of nothing but the pleasure of rambling among the mountains. As soon, therefore, as those most absurd and tiresome of public functionaries, had given us *pratique*, we walked along the mole of the village, and there sat down in the shade of a verandah, or portico, in front of the little café or wine-shop, kept by the gentleman who had undertaken to send up to Girgenti for the *letigas*, or litters.

In a few minutes we were surrounded by every idle man, woman, and child in the little hamlet,—the great majority, I suspect, of its whole population,—who gaped at us in silence, as if such a sight had never been seen before. In truth, I don't suppose such sights are frequent in Sicily; for though that country does not lie far, counted in actual miles, from the beaten track of European tourists, it certainly costs a good deal more trouble to get to any part of it, especially at such an out-of-the-way place as Girgenti, than it would take to reach places five times as far off, provided no sea intervened. What a barrier, after all, is a little strip of salt water, though crossed in a few hours! Witness the channel between France and England, and consider what modifications—political, historical, and moral, even so small an intervention gives rise to! Even fresh water, as I heard a military engineer once remark, when this subject was discussed, if properly disposed in the fosse or ditch of a fortification, though but a few yards in width, may check the attack of ten thousand resolute men. But it is salt water and sea-sickness, and the discomforts of navigation, which indispose the world to hold intercourse with islands, and happy for us it is so; though certainly this circumstance proves the misfortune of Sicily.

I do not think, indeed, that such exhibitions as our party presented could have been frequent at the port of Girgenti. It consisted of eight souls in all, including the

little boy and his Italian nursery-maid, whose ecstasy on again getting on terra firma exceeded that of any of the group. The little fellow's rosy cheeks, and the other children's dresses, and indeed our whole aspect were so different from those of the natives, that the wonderment we caused was not unnatural, and for a time rather amusing to ourselves—it could scarcely have been greater had we landed among savages. But by-and-by when we began to get hungry, and the sun to get hot, and no letigas made their appearance, our interest in the fine scenery and the strange people rapidly diminished. Meanwhile, the Sicilian children, emboldened by our familiarity with their seniors, crowded round ours, and by their proximity effectually demolished the picturesque sort of interest which belonged to their appearance when a little way off. In a warm climate rags and beggary are not necessary accompaniments, for the drapery may be so scanty, that the "human form divine," especially in the young, has generally full play, and the cupids of Albano, or the angels of Rubens, are scarcely more graceful than the idle boys of any Sicilian village. Unfortunately soap and water are little in request, at least they are little used, in those parts; and other nameless refinements in the toilet of the rising generation of Sicily are quite neglected. I need say no more; but nothing could exceed the horror of our worthy Scotch upper nurse at what she beheld, except it was her indignation when any of these young barbarians came in contact with her own little charges.

An hour and a half of this steaming process was enough to evaporate all our patience. The mountains looked flat; the warm scenery cold; the gay Sicilians dull; and there seemed nothing left for us but to go back again. Just, however, as we had adopted this wise resolution, an over-heated scout made his appearance on the adjacent height, bawling over the edge of the sulphur cliff, and signifying by his gesticulations that the vehicles were coming down the pass. Accordingly, the tiresome letigas at last entered the village, and in these our party were presently stowed away. In the first were placed the English and the Italian maids and the youngest child;

in the next our German governess and the two girls, whilst we brought up the rear—and a strange looking procession we made!

A letiga is neither more nor less than a double sedan-chair, supported by two mules instead of by two men, between the poles; I call it double because it holds two people, who sit face to face, but it is no wider than a sedan-chair, in fact, is scarcely so wide, and can hardly be called large enough for two grown-up persons to sit in comfortably. Yet the motion, even on the roughest and steepest roads, we did not find very disagreeable, though the position was rather cramped, and the drivers insisted upon our sitting not only quite still, but in such a manner that we might exactly balance each other. If we wished to look on one side, and in doing so stretched our heads out of the window, the muleteers set up such a melancholy cry of remonstrance as made us draw them back again, like a tortoise who gets a rap on the nose. It seems that wherever a mule can travel, a letiga may be carried; and this is certainly no small matter in a country like Sicily, where in most places the roads are mere foot-paths; and where, even were the island in the hands of energetic and wealthy people, it would be very difficult to make efficient highways, except by the expensive processes adopted among the Alps, of which, it is true, there does occur a good example in the government road over the hills near Palermo. The good folks of Malta entirely failed to convince us that their barbarous caresses were the vehicles best adapted to the streets of Valetta; but a small experience at Girgenti satisfied us that the letiga was the only conveyance for Sicily, not only on such short excursions as we made, but for going round the island. Our worthy old friend, the late celebrated Mrs. Starke, accompanied by an English lady of title and fashion, actually made the tour of the whole island in letigas; and I heard them declare afterwards, that upon the whole it was not an unpleasant mode of conveyance. I do not know what Indian-rubber property these ladies may have possessed in their bones and muscles, to resist the jolts and bumps of a Sicilian road, but I suspect the

moral elasticity of their spirits did more for them than the physical spring of their bodies, for the *letiga* boasts no such luxury. At all events I know that, after somewhat more than an hour's travelling up to the town, from the port, I got out with as much satisfaction as ever I disembarked from any vehicle in my life; except on the occasion when I made my escape from the "rotonde" of a French diligence, in which I had been rumbled about all night, from Paris to Rouen. I had business on hand—was in a great hurry—but flesh and blood could stand no more, so I stopped at Rouen, missed the steamboat from Dieppe to Portsmouth; and thus lost four precious days, all because I could not stand four hours more of such hideous jolting.

Girgenti is beautifully situated on the top of a hill, but like almost all other cities, its beauty is lost the moment it is entered. The contrast, indeed, between the man-of-war-like cleanliness of Malta—in the streets of which one is afraid to tear up a letter lest the police should find fault with the scraps as a nuisance—and the ultra Neapolitan dirtiness of Girgenti, was striking to more senses than one. But we consoled ourselves with the prospect of the nice breakfast we had commanded. . Alas, alas! we may call spirits from the vasty deep, and order breakfasts in Sicily; but will they come when we do call? Our appetites had been sharpened as on a hone, partly by the unwonted exercise of the *letiga*, and partly by the moral influence of Mrs. Starke's glowing description of the inn. I suspect the people must have known beforehand that this distinguished road-book writer was coming upon them; and foreseeing the mighty influence of her pen, may have prepared for her what they certainly did not prepare for us. Not only was nothing got ready, in spite of the flattering assurances of our friend at the port, but what was worse, there seemed to be nothing wherewithal to provide a meal. And really it does appear strange that in an island fertile, as it would seem, with every gift of nature, and situated so as to prove the very focus of commerce, it should be destitute even of the commonest luxuries—almost the necessities of life. In the first place,

we could get no tea nor coffee; secondly, no milk; thirdly, no bread, except such as being made of Indian corn, and stale and as hard and black as the timbers of the Royal George, defied the inroads of our teeth.

As it is utterly impossible to enjoy the temples, or any thing else, in this state of affairs, we must positively have retreated to our ships in search of provisions, had I not, in the culpable absence of every other precaution, bought four goodly fish out of a boat which had sailed into the port as we were landing. These, which I had made the letiga driver tie to the saddle-bow of his leading mule, proved our mainstay, and added to a muttonchop, which our distracted steward Giuseppe managed to discover in the town, restored the equilibrium of our good humour.

Mrs. Starke, whom we had fallen in with at Palermo on first touching at Sicily, had given us a copy of her book for a resident at Girgenti, assuring us that this attention, and the use of her name, would prove a sufficient introduction to one of the most intelligent and well-informed men there, so we sent off our parcel, and at the same time despatched a letter of introduction we had brought for another gentleman, a well-known man of letters, and withal an artist and antiquary, but who, being confined to his house by a migraine, could not come to us, but sent to say if we would do him the honour to visit his collection of antiquities, he would afterwards furnish us with a guide to the temples, and aid us by sailing directions. Shortly afterwards a native gentleman made his appearance; and I feel persuaded that a more learned or more highly-informed personage is not to be found within sight of Mount Etna, or any one more minutely acquainted with the details of the ruins; but, oh me! such an endless tongue! At the slightest hint of curiosity on our part, he set off in a lecture on the name, origin, uses and abuses, size, age, and present state and condition of each of the temples, in one unbroken chain of eloquence, that our ears became fatigued, and our attention exhausted in the course of no very long time. The truth was, we cared little or nothing about the names of the temples, or their history at any period of

their existence; all we wanted was to be allowed to see them in peace and quietness, and we dreaded above all things the companionship of such a loquacious cicerone, who was evidently resolved not to spare us a single ruin, or even a single column, but was bent upon dragging us, in spite of our repeatedly expressed disinclination, over every square inch of the antiquities, each and all of which appeared in his eyes to possess equal value. Our agony, therefore, was extreme when he exclaimed, with a flourish,

"I'll be your guide! But," added he, his native Italian politeness rising superior to his enthusiasm about the antiques, "I shall now leave you to finish your breakfast."

I thought this a good opportunity of trying to get rid altogether of such a "companion to the ruins" as would inevitably have demolished our pleasure in seeing them, by the intense puppyism of his antiquarian details, about which, even if we had had any faith in their correctness, instead of distrusting the whole, we should not have cared one single straw. So I took up the other Signor's note, and said that we had already been offered a guide. This produced a pause and a look of displeasure, of which I took no further notice than handing to our friend his rival antiquary's epistle. He read it with evident contempt, and having remarked that the guide we should be provided with would be a mere ignorant clown, he left the room with a flourish which gave us hopes that we should see no more of him. But we never felt secure until we found ourselves fairly out of the town, with no other guide than the unpretending person first offered to us, under whose silent convoy we enjoyed our ramble among the ruins without the smallest drawback.

Neither of the two temples which are still standing equals either in beauty or in magnificence the temple of Neptune at Pæstum, though they are certainly larger, and built in vastly more picturesque situations, their sites being evidently chosen expressly to show them off, near the edges of bold cliffs, on elevated grounds, so as to be visible from all the surrounding country. As far as I could judge by the eye, the columns of the Girgenti

temples have no swell or *entasis*, as it is called, for the lines forming the sides of the flutings appeared to be quite straight. I had no means of measuring the height of these columns; nor should I have taken the trouble to verify measurements which must be well known, and are of course to be found in every book of ancient architecture; but I had the curiosity to measure the distance between the columns respectively; and as I am not aware that this has been done before, I shall mention some discordances which seem to me curious.

The Greeks, as every one knows, in their porticoes of the Doric order always placed the column at the corner rather closer to its adjacent neighbours at the front and sides of the temple than the rest of the columns are placed. I believe that architects explain the reason of this departure from uniformity by saying that the end column of a portico, standing as it does at the corner, and having nothing on one side of it but the open sky, requires support, as it were; and if its distance from the next column were really the same as that between the columns further from the angle, it would look as it were greater. There is, however, a more substantial architectural reason for placing the corner column nearer those which stand next it, namely, the symmetrical necessity, so to speak, of bringing the last triglyph to the extreme end, or corner, of the frieze, instead of placing a bare metope at the end of that member of the entablature. This vicious practice we sometimes see adopted in the degenerated works of the lower empire, but never in the older temples of the Greeks. In order, however, to accomplish this purpose, which is quite essential to the beauty of the whole, a departure from strict rule and compass uniformity must be adopted. Either the end column of the portico must project beyond the outer edge of the architrave, in order to bring the axis of the column to plumb the middle line of the last triglyph, which would have the most awkward look possible, or the end column must be brought so much nearer to its neighbour as to place its outer side perpendicularly under the extremity of the architrave; thus disregard-

ing the plumb line which falls from the centre of the triglyph at the corner, which, in that case, will no longer pass through the axis of the column.

In short, be the reasons what they may, the fact is, that we find in all the best old Greek temples, the distance between the corner column of the portico and that next to it, considerably less than the distance between any other two columns. Let us now see what occurs at Girgenti, where the measurements which I made give a different result in some respects from what I had been led to expect. Nothing in the following observations is inconsistent with the above theory, and perhaps they may be worthy of the attention of persons who may be better qualified than I am to judge of their value.

The distance between the corner columns and those which stand adjacent to them on the north side of the Temple of Concord, I found to be 2 feet 4 inches; the distance between the second and third columns 2 feet $7\frac{1}{2}$ inches, but, to my surprise, the distance between all the other pairs of columns standing further from the corners, was found to be 2 feet $11\frac{1}{2}$ inches. On turning the corner and measuring the distance between the angle column and that adjacent to it in the portico, I found it to be as before 2 feet 4 inches, and the distance between the second and third column of the portico 2 feet $7\frac{1}{2}$ inches; but that between the two centre columns of the portico was 2 feet $11\frac{1}{2}$ inches, or exactly the same as between all the columns of the sides further from the angle than the second column. I should mention that there are six columns at each end of this temple, and thirteen at the sides, and the above measurements are very nearly the same at both ends.

The columns on the north side of the Temple of Concord are all so nearly perfect that I can depend pretty well on these measurements, which were made from the hollow of the fluting. Those on the south, being exposed to the rainy winds, are much more worn; but those at the west end are in so good a state that the above measurements may I think be relied on nearly. At the east end there occurs a discordance of an inch in the

distance between the second and third columns (2 feet 8 $\frac{1}{4}$ inches being the measurement instead of 2 feet 7 $\frac{1}{4}$ inches.) But I suspect this is caused either by the accidental weathering of one or both the columns, or by the working of repairers and restorers—those cruel destroyers of the antique.

From the two comparatively complete temples called Concord and Juno Lucina, we proceeded to the remains of an enormous structure, said to be a temple dedicated to Jupiter Olympus, which I suspect has never been finished—perhaps never commenced. The lofty platform on which the columns stood, or were meant to stand, gives some idea of the magnificence of the architect's conception, and the vast piles, and long lines or ridges of carved stones lying outside the four faces of the platform give abundant proofs of the vigorous manner in which it was intended to carry that conception into effect. I am not aware of what antiquarians who have studied such scenes say of this ruin, but I cannot in the least comprehend how any temple, if it ever were completed, could possibly be thrown down, either by an earthquake, or by the slower, though still more destructive hand of man, with such perfect regularity that the fragments of each of the four faces of the building should be deposited in a manner exactly similar, all round, and all on the outside, without one fragment having fallen within. I do not mean to assert that there are literally no fragments of the columns, or of the entablature which they either did support, or were intended to support, to be found within the bounding lines formed by the great steps leading up to the platform. But it struck me that all such fragments belonged to the cella, or inner part of the edifice.

It also occurred to me on the spot, that most, if not all, these stones are merely the dressed materials, brought to the spot, probably by contract, and ready to be put up when it should suit the convenience of the architect, or the finances of the government who gave the order. The more urgent expenses of war might swallow the money intended for the erection of this huge temple; or a new government might not have taste or inclination to follow

up the magnificent designs of its predecessors in office. In opposition to this notion it may be said that the stones, though most of them are carefully hewn, lie in rather too disorderly a state to bear out the idea of their having been placed there in readiness to be put up. But, surely, in the lapse of upwards of twenty centuries, during which these noble temples have probably been used as quarries, just as the poor Coliseum at Rome was, we can imagine the arrangement of the building stones to have been often disturbed.

I could discover no blocks intended for complete columns, only pilasters; but as these measured 13 feet 4 inches in diameter they are splendid-looking works, and I could stand in one of the flutings quite easily. This temple is said to be 368 English feet in length, by 188 in breadth. In the centre of the platform lies a very respectable giant, formed of several pieces of stone, the whole being 27 feet long; and many other fragments of equally gigantic statues lie scattered about. It is supposed that these figures acted the part of Caryatides, or supporters, to some part of the interior of the edifice.

The examination of the two complete temples and of this huge prostrate one, so entirely spoiled us for every thing else, that the guide and the guide-books failed to inspire us with any interest for sundry other piles of ruins, all bearing the names of some god or goddess, and probably very interesting to those who have time to study them, and who have, besides, classic lore enough to investigate their history. We had plenty of time, but no classical lore; and therefore we could not, and in fact did not try, to work ourselves up to the proper pitch of faith in our guide's erudition to listen either with or without impatience to his lecturings. Satisfied with what we had seen, we interdicted him, upon pain of forfeiture of an extra gratuity, from speaking a single word, except when asked a question. We then took our leave of these stupendous ruins, and returned by another road to our ship, without examining several ancient remains to which the disappointed cicerone would fain have called our attention.

CHAPTER IV.

**SAMPLE OF NEAPOLITAN SEAMANSHIP—SYRACUSE—GREEK TEM-
PLE—DIONYSIUS'S EAR—GARDEN OF A CONVENT IN AN ANCIENT
QUARRY.**

NEXT morning we were rejoiced to observe that the wind blew fair for us to proceed on our voyage to Syracuse, and we commenced the simple operation of getting out of the mole of Girgenti at nine o'clock; but it was not till half-past one that we succeeded in getting to sea—just four hours and a half in accomplishing what, with the most ordinary management, might have been effected in twenty minutes.

I have already mentioned that our brigantine's head was tied to the wharf, and her stern held out by an anchor in the fair way, so that if sail had been made on her, the shore hawser let go, the vessel been pulled off to the anchor, and pains taken to cast her the right way, we might have stretched right out to sea on the starboard tack, the wind being to the southwestward. But our worthy skipper, although one might have supposed his long experience would have taught him better, did not prepare his sails till he had tripped his anchor, and then he managed to cast his head the wrong way—an error which brought his jib-boom end over the mole head, and very nearly swept away the roof of the Sanita office, an event which we were spiteful enough to pray for. In order to save this and worse evils, our poor captain, unfertile in resource, felt, like many other blundering officers, that something must be done, but knowing not what, did just the very thing he ought not to have done, and let his anchor run down again to the bottom at the wrong

place. By the time the cable was tight, the vessel had swung alongside the quay, and there we lay exactly in the position we had occupied three-quarters of an hour before, only turned end for end. It was as plain as A, B, C, what ought now to have been done, for in truth the ship was in a better situation for going to sea than she had been at first, inasmuch as her head was turned outwards instead of her stern. But the captain having made sundry obvious false moves in his game, and lost the confidence of his crew, and with their confidence, as is usual in such cases, both their respect and their obedience. The poor man showed, too, that he was at a loss what to do next, so the mate tried his hand, but the crew not liking this, failed to execute his orders, and in a little while, every man and boy along the decks busied himself, not in working, but in giving his opinion, and suggesting his own manœuvre for extricating us from our scrape. This horrid confusion was greatly augmented by the vociferous exclamations of the harbour-master and his people, who moved up and down the wharf abreast of us, alternately scolding us for our bad management, and recommending fresh operations—sometimes assisting, sometimes impeding us.

For about half an hour I was diverted beyond measure at this strange specimen of Neapolitan seamanship; but when a full hour had elapsed after we had got back to our old position, I began to fear we should either not get out before the sea breeze set in, or that we should be drifted on the shore and be wrecked altogether. So I ventured to put in my oar, and told the captain, as well as I could command Italian words, what I thought he ought to do,—recommending him to run a kedge out to sea, to haul his vessel off to it, and then proceed to make sail. This he at last succeeded in doing; but then he had his first anchor to pick up, without which he could not start. This occupied his long-boat another hour, and after all it was touch-and-go with us whether, after four hours' work, we should not have found ourselves either plump on the beach, or entangled again among the shipping in the port!

When, however, we did get to sea, and made sail, we spanked along finely till about four o'clock, when the wind chopped round dead against us, blowing from the southeast instead of the southwest, the wind which had prevailed all the morning. Had we at that critical stage of our passage been fifteen or twenty miles further on, as we might and ought to have been, if we had left Girgenti at nine o'clock, we should have been able to have made a fair wind of it, and steered into Syracuse with a flowing sheet. As it was, our bungling operations placed us to the westward, that is to leeward, of Cape Passaro, instead of to windward; and instead of our anchoring at eight o'clock in the evening, we had the mortification of being left all night to kick about, with only the moderate probability of being able to get far enough next morning to avail ourselves of the sea breeze. Meanwhile the fresh head wind and the head sea had knocked down all the party but myself; and the same company who had sat down so merrily to breakfast, were all now prostrate on the deck, sea-sick and helpless. Judging, however, from the experience I began to gather of that pacific region in that charming season—the beginning of June—I anticipated that before the sunset the wind would fall, and having held a consultation with our steward Giuseppe, the dinner was put off from three till six, by which hour the breeze had lulled almost to a calm, and the sea so entirely subsided that the water lay as smooth as a mill-pond. The captain, to oblige us, steered close along the beautiful shore, where we soon forgot all our disasters, and while enjoying the effect of the sunset on the mountains lying between Mount Etna and Cape Passaro, we rather rejoiced than otherwise at the delays which had provided us such a treat.

Next day we rounded the above-mentioned cape, and having caught the sea-breeze rattled before it in such fine style, as to enter the magnificent harbour of Syracuse at three o'clock. Owing, however, to the sleepy-headed manner of doing business in the "sweet south," especially in Sicily, we were kept waiting three very mortal hours in the most wanton way possible. One of

these we were forced to pass on the beach, within the bars of a sort of cage, like wild beasts, guarded by soldiers with loaded muskets! It was in vain we argued that we had come straight from a neighbouring harbour, in the same island, under the same government, and during a period of perfect healthiness, from which very place persons travelling by land were allowed to enter the town freely. All would not do! Our names had to be called over, our ages demanded, our objects in making the journey inquired into, and twenty other similar impertinences gone through, under a set of the most solemn coxcombs I ever had the misfortune to deal with, before we were allowed to pass their barrier. While undergoing this irksome detention, and grieving to see time thus trifled with, we amused ourselves with observing a set of ants at work, which looked as if they were sent there as a satire upon the slow-working habits of the people, and to show how superior the brute, or rather the insect part of the creation, were in diligence over the human part. But no sooner had we escaped from our cage than we fell into the hands of a set of harpies fully as busy as our friends the ants, in the persons of the masters and waiters of the *Albergo del Sole*, with whom we had to make a specific bargain before entering their house—a painful and humiliating but indispensable ceremony.

We also found ourselves in the midst of a grand and very busy “Festa,” and having fallen in with a procession, saw an illuminated church, and witnessed a very tolerable display of fireworks, let off in honour of the conclusion of the eight days’ fête of Corpus Christi. The fireworks we saw to great advantage from the English consul’s window overlooking the Plaza, but before they commenced I had time to make a run to see an ancient Doric temple, with columns very complete, reminding me more of Pæstum than those of Girgenti had done.

This temple of Minerva, as it is called, owes its preservation to its having been converted into a Christian church so early as the seventh century. Eleven columns are still standing on one side, and eight on the other—

all very perfect, both in their flutings and in their capitals. The architrave on the north end, and most of the frieze, are also well preserved. The columns are partially built into the walls of the church, but being much wider in diameter than the walls are thick, they show both without and within. The action of the elements has not materially injured the external faces of these pillars, but the barbarous, ignorant, tasteless blockheads who have had charge of the inner sides, have so bedaubed them with alternate coats of paint and whitewash, that all the sharpness of the edges of the fluting, and consequently much of their beauty, is lost in the rugged and irregular surface. As an earthquake in the twelfth century shook down the roof, I suppose it was upon the same occasion that the tops of five or six of the columns on the north side, together with the massy entablature which they support, have been forced so far outwards that there appears a considerable bulge at this place. The columns are twenty-five feet in height, and as nearly as I could measure six feet in diameter at the base. I think they have a slight swell or *entasis*, which gives them an extremely graceful appearance, and renders the building, upon the whole, fully as worthy of admiration as any thing at Girgenti.

It is a pity that the government do not take steps to disinter this magnificent ruin from the mass of rubbish which obscures so great a part of its beauty. We cannot but feel grateful for the accidental circumstance which has led to the conservation of this temple; yet now, where every such structure is at least as safe as the church which hides it, this venerable relic—the only one of its kind—of the ancient magnificence of Syracuse, might be allowed to come forth and show itself. If this were done it would prove a great source of attraction to the place, especially as it is far more accessible than either Girgenti or Selinuntium, and lies directly in the fair way between Naples and Malta.

On the following day we busied ourselves very agreeably in seeing the principal remains of the ancient splendour of this celebrated city. Of these we were most in-

terested by a theatre, said to be of the oldest times of the Greeks, some three thousand years ago, and an amphitheatre framed probably by their Roman conquerors, a thousand years later. The amphitheatre, though large and in some respects remarkable, looks small in comparison to those of Rome and Capua. The theatre, on the other hand, is a first-rate work of art in its way; and, I believe, the largest in the world. It was called, if I mistake not, by Cicero, the *Circus Maximus*, and is 116 feet in diameter, being a little more than a semicircle. Both it and the amphitheatre are excavated out of the solid rock. Fragments of aqueducts, run dry for ages, tombs, and cenotaphs raised to perpetuate the memory of men long since forgotten, besides piles of ruins of nameless edifices, and numberless excavations in the rocks, for unknown purposes, over miles of area, give ample evidence of the extent of the city, now shrunk into a petty town, at a remote angle of the former capital.

Perhaps, however, the most striking proofs of the magnitude of the old city of Syracuse, are the enormous quarries from which the stone had been hewn in past ages, to construct the houses and temples, the dwellings and places of amusement of the million inhabitants whom history tells us, resided within its walls. One of these quarries, which is now the garden of the Capuchin convent, we examined minutely. It is a deep, wall-sided, irregular-shaped cut in the rock, said to be one hundred feet deep. At some places this huge excavation is a hundred yards broad, at others it is contracted to a tenth of that width. The ground at the bottom is not level, but rises and falls according, I imagine, as the piles of rubbish were moved hither and thither by the workmen. It is everywhere covered either with vegetables, or with flower-beds, either under the spade of the gardener, or thickly grown up with orange-trees, olives, limes, and figs, some of them absolutely like forest-trees; besides almonds, vines, pomegranates, and other trees, and flowering shrubs, all luxuriating in the shelter of this singular excavation. The sides at most places are richly clad

with a matting of ivy, it is difficult to tell how thick, which occasionally hangs down like a curtain, in front of enormous caverns, receding far back into the living rock. The principal of the convent, greatly pleased with our raptures, showed us over his garden, and was evidently flattered by our saying we had seen nothing in the world so like what we read of in the Arabian Nights.

In another quarry, of still vaster dimensions, we visited the celebrated Ear of Dionysius, where the echo is certainly very wonderful; a pistol was fired near the mouth, while we stood at the inner end of the cave, and I counted the reverberations for twenty seconds. I feel it difficult to describe the solemn effect of this sound, which more nearly resembled a peal of thunder, at a short distance, than any thing else, but divested of the abrupt, startling, rattling sort of harsh sound, which belongs to thunder. On the contrary, though very loud, the report of a pistol fired in Dionysius's Ear, was rather of a soft sound, even from the first, becoming more and more mellow at every repercussion of the air.

In most of these quarries the marks of the workmen's tools are very apparent. It is even possible to tell the size and shape of many of the stones which have been cut out, and sometimes to follow the order in which they were removed. These trivial, but distinct and indubitable traces of the handiwork of the ancients carry with them, it strikes me, a peculiar sort of authenticity and unpretending truth, which brings old times more vividly before our minds than the great works of art do. For it may be almost said that the statues and temples belong to a different and higher order of beings, with whom we moderns have little resemblance. When we lose ourselves in admiration of the Venus, or the Apollo, or stand awe-struck before the Temple of Neptune at Pæstum, it is almost as difficult to bring the imagination up to the belief that we are the same race with the men who executed these works, as it is when looking at the planet Jupiter, or the ring of Saturn, to conceive that these stupendous bodies form an actual part of the same

system to which we pigmies belong. We know by history in the one case, and by scientific demonstrations in the other, that it must be so, but it is difficult to take it all in. But the simple touch of a pickaxe on the face of the rock, in an old quarry like that of Syracuse, tells quite a different story, and one which none can doubt. We almost hear the sound ring in our ears, and half wonder that we do not see the crowds of Greek or Roman workmen labouring round about us. I remember feeling something akin to what I experienced in the caves of Syracuse, when walking alone through the streets of Pompeii, and looking into the houses and shops of our predecessors, by seventeen centuries or so, but different in no material respect from men and women of the present day.

CHAPTER V.

ON THE QUARRIES OF PARIS—ARGYLESHIRE—WALES—ROME—
EDINBURGH, AND MELROSE.

I HAVE all my life felt a singular delight in visiting quarries, whether old or recent, abandoned or in work, provided only they were so extensive, as to afford either an insight, geologically speaking, into the structure of the world, or a sort of picture, historically speaking, of the busy workings of man. I am therefore tempted, while treating of the gigantic quarries of Syracuse, to digress a little to one or two other scenes of equal, or even, in some respects, superior interest. Of these I might well place in the first order of importance, the celebrated gypsum quarries of Montmartre, near Paris, which are curious not merely from their vast extent and singularity of shape, but in a much higher degree from their furnishing the greatest library, as it were, of natural history which the genius and industry of man has yet given to the perusal of the world. The celebrated Cuvier and his distinguished colleagues in geological research, have opened of late years, chiefly by means of these quarries, a field of knowledge heretofore unsuspected, or uncertain, but which may, by their agency, be studied with a degree of exactness of which former inquirers into the fossil history of the earth knew but little in comparison. I should venture strongly to recommend every one who cares at all about the fossil species of animals, which have at one time peopled the surface of the earth, but which are now entirely extinct, to examine the quarries of Montmartre with Cuvier's works in their hand. The time may come, perhaps, when these enormous caverns,

the work of man, may assume another kind of interest, similar to that which engages our attention at Syracuse; but at present their curiosity depends chiefly on the insight they afford us, not into the workings of man, but of those of Nature in by-gone ages.

Some years ago I made a tour in the Highlands of Scotland, one of my objects being to visit the great slate quarries at Balahulish, and as the foregoing speculations have a bearing on the purpose of the journey alluded to, and are found in connection with some notices of other quarries in different parts of the world, I shall venture to give them a place here.

It was early in the month of July, during a season very uncommon for its absence of rain, that we stopped at the neat little village of Killin, at the western end of Loch Tay, on the banks of the stream, forming the principal feeder of that beautiful sheet of water. On looking at the map in the morning, when starting from Kenmore, and finding Killin only sixteen miles off, we naturally counted upon going a good deal further. But distance, in those wild and mountainous parts, as well as in the somewhat similar situations in Sicily, especially when making the tour of Mount Etna, must not be reckoned by miles, but as they do in Germany, by hours. If the ups and downs of the road in a hilly country were to be stretched out in a straight line, and the labour of climbing, the danger and difficulty of descending the hills, and the annoyance of the joltings and bumpings were taken into the reckoning of the day's work, double or treble the distance might fairly be set down. When speculating in this fashion it is amusing to glance at the contrast afforded by railway travelling, by which we now accomplish easily in thirty minutes, what it costs us eight hours of constant exertion to get over in the Highlands!

As we were travelling for pleasure, however, and not for mere speed, and as we were perfectly contented with our quarters, and as our postilion, a cheerful and willing lad, declared it was impossible his horses could go a step further, we made up our minds with no great difficulty to remain at Killin. Next day we pushed through hills

to King's House, in the wildest, most forlorn, and most desolate region I ever saw—having nothing in sight all round but barren, or else boggy mountains, naked at top as the day they were born, and bearing on their sides nothing but heath, not in a continuous matting, but divided into ugly, sluggish, black masses of peat-moss, intersected vertically by innumerable channels of mountain torrents, now still and dry, but carrying with them abundant traces of violence at their fitting seasons, when rains are abroad. At the bottom of each of these water-courses there lies a large assemblage of materials brought down by the stream, and forming a *talus*, or delta, far along the level country.

Sir Walter Scott, in his fine poetical way, compares the career of Bonaparte to such a scene as that above alluded to, in the following singularly graphic lines :

“Or is thy soul like mountain tide,
That, swelled by winter storm and shower,
Rolls down in turbulence of power,
A torrent fierce and wide :
Roft of these aids, a rill obscure,
Shrinking unnoticed, mean, and poor,
Whose channel shows displayed
The wrecks of its impetuous course,
But not one symptom of the force
By which these wrecks were made !”

“This passage,” says Mr. Lockhart (in language scarcely less poetical than that of his great father-in-law) “always struck me as pre-eminently characteristic of Scott’s manner of interweaving, both in prose and verse, the moral energies with analogous natural description, and combining thought with imagery.”*

The road along which we travelled past King’s House, on our way to the great quarries of Balahulish, is the only line of highway in that part of the world, being one of those originally made by government, though now kept up by the county. As we were winding slowly up the southern side, of a weary, black mountain, we came most unexpectedly in sight of a great wagon or caravan

* Life of Sir W. Scott, vol. iii. p. 387.

—which seemed to our eyes strangely out of place—for what, we thought, could induce any one to bring wild beasts to a still wilder country? On coming nearer to it, we discovered eight or ten men standing round a fire, kindled in a respectable-looking movable grate; and from the windows of the caravan we detected several curly heads thrust out, evidently attracted by the unusual sound of carriage wheels. Round about lay wheel-barrows, pickaxes, and shovels—whence we soon found that this was a party of road-makers, or rather road-menders. As the country is so entirely desolate, and quite destitute of inhabitants, except at long intervals, it would be impossible to maintain workmen steadily at the proper places, without some contrivance of this nature. Like your provident snail, therefore, these poor fellows carry their house and provisions about with them, and go a-voyaging over the moors pretty much in the style that we seafaring people do over the ocean.

The crew belonging to this caravan or ship of the mountains, consisted of sixteen souls—there being eight beds, or one for every two men—and close stowage, too, as it appeared, since space must have been left for packing away their working-tools, provisions, and clothes. Two stout horses, ready to be employed in drawing cart-loads of gravel and stones to the road under repair, grazed near the caravan, upon what they could catch among the heather. When the vehicle was required to be got under weigh, in order to engage with a new piece of road, the gravel carts were towed behind, and the horses being yoked in front, the whole mass moved ahead together. In this manner, without entering a house, indeed scarcely seeing even a hut, much less a village, these hardy pioneers of the hills continued at work during the whole of the fine season, that is, from the beginning of May to the middle or even to the end of October, which is generally a very favourable month in Scotland. In this interval they go backwards and forwards along the whole line from Tyndrum to Balahulish, a distance of about thirty-three miles.

Shortly after quitting King's House, we entered the

Pass of Glencoe, rendered so notorious in history by the murder committed in the 17th century, on a whole clan of Highlanders who inhabited that extraordinary mountain-pass. This cruelty was perpetrated by order, it is said, of King William III.; and though his guilt in this horrible transaction was nothing in comparison to that of the underlings who egged him on, yet he must for ever share no small portion of the infamy of so wanton a transaction.

The devoted clan, who were called Macdonalds of the Glen, amounted to a very small number, as they seldom mustered above two hundred armed men—and the total number put to death on the morning of the 13th of February, 1692, was only thirty-eight, including women and children, or probably not above one-twentieth of the whole. Yet it is curious, as well as instructive, to remark how much the opinions, and still more the sentiments of mankind, turn upon the manner in which such things are done rather than upon the amount of evil, nationally or individually, which is thereby effected. The most unjust wars may be entered into, and thousands upon thousands of men may cruelly perish in action, or by pestilence and famine afterwards;—a civil war may rage, and fire and sword be let loose to waste a whole country, so that, in fact, a hundred times as many horrors as were perpetrated in Glencoe may be inflicted on the inhabitants—and yet all these shall be either applauded, or forgotten, while such a transaction as the massacre of the Macdonalds is justly handed down to the universal execration of posterity. Can it be doubted that the misery brought upon the world by the selfishness, ambition, and that total want of consideration for others, (which is tantamount in its effects to cruelty,) of Napoleon, was ten thousand times greater in its amount than was wrought in Glencoe by the petty malice of a couple of inferior officers? And yet how different is the judgment of the world in the two cases!

It may be said, however, that this dreadful affair, which has no established parallel for atrocity, at least in this island, has had its good effect in uniting all men's

minds on the infamy of assassination in whatever shape—and though, in such peaceful times as these, we may fancy the warning superfluous—there can be no doubt that in war, and especially in civil war (when men are apt to lose the attributes of humanity to assume those of tigers) the importance of distinguishing even between military executions of the severest kinds, and cold-blooded murders, is of the greatest practical importance. The severity with which the Highlands were visited after the battle of Culloden, for example, though infinitely more extensive, and sometimes fully as cruel in detail, as the murder in Glencoe, had a definite, open, and legitimate purpose in view, however mistaken and occasionally wanton the mode of its execution may have been. But the brutal and truly Cherokee affair of Glencoe defies even the subtlety of political logic, while it is equally repugnant to military manners, and to the common feeling and habits of mankind.

All these considerations impart an extraordinary degree of interest to the glen in question: and I cannot imagine a stronger proof of the inherent sublimity of the spot, physically considered, than the fact of its being able, as it certainly is, to excite any attention in comparison to the moral interest connected with its history. As a piece of perfectly wild mountain scenery Glencoe has no superior that I know of. In the Alps there are many ravines and valleys immensely larger, but I am not aware of any which has better claims to attention in all that relates to the fantastical disposition of barren rocks of great magnitude, tossed indiscriminately about by the hand of Nature.

As to the inhabitants, it is really difficult to understand how four or five hundred people, of which the extirpated clan is said to have consisted, could possibly have found the means of subsistence in such a region. Although the whole length of Glencoe may be about ten miles, we counted in it only three cottages; nor could we imagine where the rest, if any, were situated. This absence of human habitations lends additional melancholy to the scene,—making it seem as if the slaughter of the clan,

who dwelt in it nearly a century and a half ago, had rendered the spot uninhabitable. Moral catastrophes, however—and most fortunate is it that it is so arranged for us—are very like geological ones in this respect, for after a brief season they leave but faint traces of the fury of their ravages; and in point of fact, however terrible at the time, exert but little influence on the habits of those who succeed. A debacle or an avalanche may obliterate, in a moment, every vestige of man's habitation along the whole extent of a populous Swiss valley—an earthquake may shake down a Peruvian or a Calabrian city, or a stream of lava obliterate a Sicilian town; and yet in a few short years afterwards all the houses shall be rebuilt, the fields glowing again with corn, and every trace of violence so completely overlaid by symptoms of tranquillity and prosperity, that the senses almost refuse to admit the evidence of the reason. Even if we have actually witnessed the devastation with our own eyes, we can scarcely trust our memory when the whole is so speedily changed. I have even witnessed something of the same kind on fields of battle, and in sacked towns, where it was positively difficult, very shortly after the events, not only to find a single person on the spot who knew any thing of the shocking scenes which had been enacted there, but even to discover the minutest remnant of violence! So far, indeed, Glencoe is distinguished from most scenes of this kind; for we encounter nobody in those regions on the pages of whose mind the whole transaction does not appear, as it were, to be stereotyped in blood.

We breathed more freely when we found ourselves in the open country again, and, disentangled from the mountains and their very painful associations, came suddenly upon the celebrated excavations of Balahulish.

As these slate-quarries are of considerable extent and importance, I have taken pains to ascertain some of the leading particulars respecting their size, mode of working them, form and quality of the slates, the annual produce of the quarries, and the number of men employed. I have been induced to give these details, as they furnish,

I think, better means of judging of that curious locality than any mere verbal description, and are more likely to tempt others to visit a scene of high interest in a geological as well as commercial point of view. For the substance of the following interesting information on these heads I am indebted to the kind attention of Mr. Henry Stuart, brother of the proprietor.

The Balahulish, or, as they are called on the spot, the Balachelish (though how pronounced I have not an idea) slate quarries, are situated in the parish of Appin, the most northern in the county of Argyle. They were first opened some time previous to the year 1760, and lie on the side of a high mountain which rises immediately out of the arm of the sea called Loch Leven, one of the branches of the Linnhe Loch. The vein of slate, which dips at an angle of about 80° , commences at the shore and stretches southward along the side of the mountain. The face of the rock is laid open by workings fronting the west, the inclination of the vein being to the east. The workings are conducted in three levels, rising above each other as steps of stairs; all the levels are entered from the north end of the vein, that end of it which abuts upon the sea. Their total height from the bottom of the lowest level to the extreme height of the rock, is about 216 feet; and the face of the rock wrought extends to about 536 feet in length. The first, or lowest, level enters from the high road at a height of 28 feet above half-tide mark. A tram-road extends along the whole face of the rock to a bank formed in the sea by the rubbish of the quarries; along this road the whole of the quarried rock is carried, the blocks which contain workable slate being manufactured into their various sizes on the bank, and the unproductive part, or rubbish, being thrown into the sea.

It is rather provoking to think that the proportion of workable to unproductive rock is as one to six; and such would soon be the accumulation of rubbish, that if both it and the water did not find a convenient vent in the adjacent sea, the works must be stopped. As it is,

no pumps are required, for the water runs off naturally, all the works being open to the sea and above it.

The second level is 66 feet above the bottom of the first, and communicates in the same manner with another bank, also formed in the sea, by an arch thrown over the high road, where its produce is disposed of in the same way as in the first. The third level is 74 feet above the bottom of the second, and rises to the extreme height of the hill in that part, which is 76 feet above its bottom; the produce of its level is conveyed down an inclined plane to the same bank where the second is emptied.

It is in contemplation to open a lower level from the level of half-tide mark, to be wrought in succession to those now in operation, to reach which it will be necessary to tunnel under the high road. It will be observed that all these levels being above the surface of the sea, and open to it, no interruptions to the workings can ever arise from an accumulation of water, which is drained off immediately on its rising.

The harbour, which is safe and commodious, is formed by the banks of rubbish projected into the sea on each side, which completely shelter it from all winds. There is an extensive wharf for shipping, alongside of which vessels of any burden can lie to receive their cargoes. The manufactured slates are conveyed for shipment from the banks by tram-roads or inclined planes to the vessel's side. The distance of the farthest off part of the rock which is wrought to the shipping wharf is 650 yards. The colour of the slate is a deep blue, sprinkled with pyrites, called by the workmen diamonds, which are so incorporated with the slate that they never drop out. The slates are allowed to possess in a pre-eminent degree all the qualities of permanence of colour, strength, and durability of material essential to roof-slate. The various descriptions of slate manufactured are—

Duchess	-	-	-	-	-	-	-	24 in. by 12
Countess	-	-	-	-	-	-	-	20 " 10
Sizeable (not of a uniform size, but averaging about)	-	-	-	-	-	-	-	14 " 8
Undersize	do.			do.				9 " 5

The nature of the rock does not admit of an extensive manufacture of the larger sizes, the chief production being the sizeable and undersized. The annual quantity produced of all the above kinds varies from 8,000 to 11,000 tons, or, in numbers, 5,000,000 to 7,000,000 of slates, of all sizes; they are shipped to almost all the sea-ports in Scotland and Northumberland, from whence they find their way to most parts of the kingdom. Occasional shipments of them are made to the American, West Indian, and Australian colonies; not directly from the quarries, but from ports trading to these countries. The slates are generally shipped in small coasting vessels of from 40 to 100 tons burthen, but occasionally Baltic traders of somewhat larger size call for cargoes, for the ports to the eastward, after discharging in Ireland or on the west coast; so that about 200 vessels of all sizes are loaded annually, whose crews may average about four men each. Besides the various kinds of slates enumerated, pavement and grave stones are manufactured, as well as soles for drain-tiles; but the production for these purposes is very limited, and the consumption local.

I have been tempted to give these details from knowing the additional interest they impart to an examination of a spot lying directly in the way of persons travelling in the West Highlands of Scotland, and who cannot fail to be struck with the wonderful contrast which meets their eye on coming suddenly on this animating bustle of human industry, out of the deep solitudes of the Black Mount and of Glencoe. It is not to be denied, however, that this contrast, and the isolated nature of their position, are very apt to make the Balahulish slate quarries appear of more extent and importance than they really are. On those of Lord Breadalbane, in the same county, as many men are employed, but his lordship's works are not all conducted at one place, which renders them less striking to the eye as a scene of activity. He also sinks into the earth to get at his slates, while Mr. Stuart, at Balahulish, slices down a hill, and therefore, as one excavation, wrought on a regular system, they are by far the largest in Scotland. Still they are child's-play compared to the

prodigious slate-quarries in Wales. The Penrhyn quarries, near Bangor, the property of Mr. Dawkins Pennant, are very similarly situated in a mountainous country, and wrought on the same principles as those at Balahulish. There are no fewer than ten levels, all rising above each other, and employment is given to upwards of 2,000 men! The slates are shipped at the port of Bangor, of which they form the exclusive trade; but from 50 to 100 vessels may be sometimes seen at a time, and some of them of large burthen, waiting for cargoes, destined for all parts of the world. Bangor is admirably situated for this purpose, as it stands on the high road of commerce, and nearly the whole trading vessels of Liverpool, wherever they are bound, can call without going much out of their course. Compared to those of Scotland, these quarries are far more wonderful works; for while they are said to yield to their proprietor between £30,000 and £40,000 a year, the annual exports from Balahulish are only about £10,000. These Welsh slates are of a more uniformly smooth surface, and split thinner than those of Argyleshire, and though not so hard, they are capable of being made of almost any dimensions.

Near Llanberris there is another huge slate-quarry, belonging to Mr. Ashton Smith, which is nearly as extensive as Mr. Pennant's; and besides these leviathans there are innumerable quarries of the same description scattered over North Wales, many of them as large, and employing as many hands, as those of Scotland; but there is not one of them all possesses more interest, or lies nearly so much in the way of tourists, as that of Balahulish, which is my reason for having dwelt so minutely upon its details.

Besides the great quarries above-mentioned—the interest of which lies chiefly in their scientific curiosity, as at Paris, or in their commercial importance, as in Scotland and in Wales—there are others which may be said to belong to history. They are among the most obvious touches of the handwriting of man on the face of the earth, and certainly the most enduring. The Coliseum at Rome, and the five hundred churches, the

monuments of antiquity, the gorgeous palaces of the middle ages, and the cloud-capt towers of the Italian wars—which their vain founders intended for eternity—are all fast mouldering away under the biting influence of Time, in spite of the buttresses which successive kings and popes have erected to blunt that sweeping old gentleman's scythe. Meanwhile the huge quarries out of which all these edifices have been extracted exist entire, and bear witness to the extent not only of those buildings, but that of a long succession of cities, each in its turn nicknamed Eternal!

The quarries just alluded to, out of which so many edifices of Rome have been built, are well worthy of a visit on the way to Tivoli. We have there also rather a striking example of the extreme insignificance of even the mightiest works of man's hand, during the short span of his existence, compared with the smallest touches from the hand of Nature. At first sight, while we are lost and bewildered with the extent of these prodigious Roman quarries, the mind looks back with a sort of awe to the busy operations of which this scene has been the theatre. We see, in imagination, thousands upon thousands of workmen digging up columns for temples to their gods, façades for palaces to their Cæsars, and building-stones for the houses of that "Senate and people" who made their influence be felt over the whole known world. We can readily fancy the time when the numerous roads to and from Rome were crowded with carts conveying these materials; and as we stand on the edge of the mighty excavation, can almost fancy we still see the distant city, the mistress of the earth, rising above its seven hills. All is now silent and solitary. The quarries overgrown with weeds and brambles, the roads obliterated, and the city which gave laws to mankind, reduced to a petty state, under a handful of powerless monks!

If we turn from this scene of utter desolation and the entire stoppage of man's proceedings, to inquire what Nature has been doing in the interval, we shall have a very different story to tell. No doubt there was a time

when the operation of the Roman quarriers were so active that alarmists among them might have looked with anxiety to the period when the stone should be worked, just as we may contemplate with apprehension the time when the coal seams of England shall be exhausted. But the reproductive powers of nature in both cases, though generally far more gentle in their action, are spread over so wide a space, and are so unintermitting, though often unseen, that they win the race in the long-run of ages.

If, when examining these ancient Roman quarries, we ask of what materials and in what manner the stone is made, we immediately discover that it is not of the same volcanic character as the rocks forming the circumjacent high grounds. The excavations, we find, have been made in a plain, the upper strata of which consist entirely of a calcareous stone, the exclusive work of a single mineral spring supplying a very small lake, or rather pool of water, called, in former times, *Lacus Albula*, and now, the Lake of *Solfaterra*. This extraordinary "source,"—this least of causes for some of the greatest effects observable on the earth's surface, lies in the centre of the plain or *campagna* of Rome; and by the simple, silent, unseen, agency of the minute deposits which its waters throw down has the whole of that vast area of solid rock, of an unknown thickness, been formed. The spring, it will be understood, takes its rise, and feeds the lake, on a high part of the *campagna*, which, in fact, is not strictly a level plain, but slopes gently on all sides, like a *glacis*, from this central point. As the water, which is much heated, and copiously charged with mineral matter, rises constantly, the lake as constantly overflows, and by spreading itself, in a very thin layer, over the ground, it is soon cooled; the pure water being then evaporated, the calcareous matter is deposited among the grass and shrubs, which are presently encrusted with a stony coating, and the interstices being likewise filled up, the whole is cemented together into a compact rock called *travertine*. This stone is of a beautiful yellowish-brown colour, and is admirably suited for

architectural purposes, not only from the richness of its tint, but from the facility with which it may be fashioned by the chisel, and its great durability under the action of the elements.

The petrifying properties of the waters of the Solfa-terra spring are extraordinary. If, as Sir Humphry Davy relates in his singular book, entitled "Consolations in Travel," a stick be immersed in this spring, it will soon be coated over with an incrustation of stony matter, which, as he explains, consists of calcareous materials. And it is clear that in time, when the wood decays, and is washed away, the form of the stick is preserved, and either the petrification exhibits a hollow pipe, or it is gradually filled up by successive deposits of stony matter. In like manner, it is easy to conceive that every blade of grass, every flower, and every wild bush, with which the plain is matted over, offers a mould upon which the petrifying waters greedily fasten to deposit their load of calcareous matter. In most cases, though not in all, the woody, as well as the vegetable nuclei rot and disappear, whilst their place is supplanted by the mineral matter of the spring. Thus, while the rock, in many parts, exhibits the forms of plants, broken sticks, weeds, and so forth, it is found to be quite solid when carved in upon. Not unfrequently portions of wood, blades of grass, and other traces of the vegetation which grew on the surface of the plain, are found so completely and hermetically cased in the travertine, that, being excluded from the air, before the process of decay had advanced to a certain stage, they obtain an immortality denied to the rest. The passage above alluded to in Sir Humphry Davy's book is so curious, philosophically speaking, and so eloquent in itself as a piece of composition, that I am tempted to quote it here. "In May," says he, "I fixed a stick in a mass of travertine covered by the water, and I examined it in the beginning of April following, for the purpose of determining the nature of the depositions. The water was lower at this time, yet I had some difficulty, by means of a sharp-pointed hammer, in breaking the mass which adhered to the bottom of

the stick; it was several inches in thickness. The upper part was a mixture of light tufa and the leaves of *confervæ*: below this was a darker and more solid travertine, containing black and decomposed masses of *confervæ*; in the interior part the travertine was more solid and of a gray colour, but with cavities which I have no doubt were produced by the decomposition of vegetable matter.

"I have passed," continues the philosopher, "many hours, I may say many days, in studying the phenomena of this wonderful lake. It has brought many trains of thought into my mind connected with the early changes of our globe; and I have sometimes reasoned from the forms of plants and animals preserved in marble, in this warm source, to the grander depositions in the secondary rocks, where the zoophytes or coral insects have worked upon a grand scale, and where palms and vegetables now unknown are preserved with the remains of crocodiles, turtles, and gigantic extinct animals of the *Sauri* genus, and which appear to have belonged to a period when the whole globe possessed a much higher temperature.

"I have likewise often been led from the remarkable phenomena surrounding me in that spot, to compare the works of man with those of nature. The baths, erected nearly twenty centuries ago, present only heaps of ruins, and even the bricks of which they were built, though hardened by fire, are crumbled into dust; whilst the masses of travertine around it, though formed by a variable source from the most perishable materials, have hardened by time, and the most perfect remains of the greatest ruins in the eternal city, such as the triumphal arches, and the Coliseum, owe their duration to this source. Then, from all we know, this lake, except in some change in its dimensions, continues nearly in the same state in which it was described 1700 years ago by Pliny, and I have no doubt contains the same kind of floating islands, the same plants, and the same insects. During the fifteen years that I have known it, it has appeared precisely identical in these respects; and yet it

has the character of an accidental phenomenon, depending upon subterranean fire. How marvellous then are those laws by which even the humblest types of organic existence are preserved, though born amidst the sources of their destruction, and by which a species of immortality is given to generations floating, as it were, like evanescent bubbles on a stream raised from the deepest caverns of the earth, and instantly losing what may be called its spirit in the atmosphere.”*

It is quite easy for the imagination to follow all these processes, without taxing its powers as sharply as the geologists are in the habit of doing in many cases. All we require in this, as in most instances of geological reasoning, is an unlimited allowance of time. Give us this, and having set our mineral spring to work in the middle of a volcanic plain, after the turbulent fires, and fierce eruptions which, for a long series of ages, may have disturbed the neighbourhood of Rome, are all extinguished. The water passing through the heart of the rocks which may require thousands of years to cool, will not only come to the surface warm, but charged, as Sir H. Davy has shown, with more than its own volume of carbonic acid gas, and with a heavy load of mineral matters. It will proceed to flow all round, and to deposit, at every successive moment, a thin layer of calcareous stone, gradually diminishing the inequalities on the surface of the plain, and by slow degrees elevating its surface. That part of the plain which lies nearest to the hot spring will, naturally, rise most, as it will be the first to rob the water of its petrifying ingredients—so that we can understand why the outlet should be found on the top of a sort of circular glacis, sloping gently in all directions, forming the surface of a series of extremely thin travertine strata, but in the aggregate probably of enormous thickness.

That this is what has been going on for a countless series of ages, is a fact which at once becomes evident to the observer on the spot, when he compares what is

* *Consolations in Travel*, page 127.

actually passing under his eye, with what has taken place lower down, and which the architects of the buildings round the Roman forum have enabled us by their excavations to examine.

To suppose that the hand of man could interfere with the course of such stupendous, though silent and gradual operations, seems, at first sight, out of the question. Generally speaking, indeed, it is so; for the influence of man, much as he thinks of his power, the spread of agriculture, and other symptoms of his handiwork, is exceedingly small, geologically considered. In the instance, however, of this celebrated spring and lake of Solfaterra, it happens that the course of nature has, for once, been entirely changed in its direction, and her works effectually put a stop to in one spot. A channel having been cut in the rock, on one side of the lake, it no longer overflows, and the feeding waters of the spring, instead of being spread in thin sheets over the campagna, now run off in a straight line, and eventually fall into the river Anio. There can, therefore, be no fresh deposits on the plain, and of course the rocky matter ceases to be formed, for the mineral ingredients are mixed with the waters of the river. The only visible effect which they produce is to kill all the fish between the confluence of this hot and poisonous stream with the Anio, and the point where it falls into the Tiber.

The next greatest quarries which I recollect after those which indent the campagna of Rome, are the prodigious excavations at Syracuse in Sicily, described in the last chapter, of which the celebrated Dionysius's Ear is merely a single corner. While the city, of which these quarries furnished the materials, has vanished so completely from the face of the earth, that it requires some trouble to find its traces, the excavations which gave it birth are as perfect as ever.

In vivid contrast to poor old Syracuse stands the New town of Edinburgh—a city with more pretensions, and less title to distinction, so far as the picturesque effect of mere buildings is concerned, than any capital in Europe. These pretensions are rendered still less substantial by

the happy elegance of outline of the Old town alongside of it, by the boldness of the castle which overlooks both, and by the matchless beauty, occasional grandeur, and pleasing variety, of the adjacent scenery—which includes not only very respectable mountains, richly cultivated plains, wooded valleys, and, above all, one of the finest specimens of estuary scenery which is to be found in the wide world. The only match that I know of for the glorious Firth of Forth, viewed from the castle of Edinburgh, is the Gulf of St. Lawrence, seen from the ramparts of Quebec. In both cases the extent of water is great enough to show that it is the ocean we are looking at; and yet the width is not so vast as entirely to remove the idea of a river, at the same time that the high grounds which form their banks would be in character with streams of such gigantic dimensions, supposing these arms of the sea to be rivers. I mention this last feature of the two landscapes in question, because in the case of one of the largest streams in the world—the Rio de la Plata, in South America—almost all idea of a river is done away with, in consequence of one bank not being visible from the other—a circumstance caused partly by the lowness of the country, and partly by the great width of the stream.

Of the many objects of interest in the neighbourhood of Edinburgh, I am not sure that there is any one better worthy of a stranger's examination than the quarry of Craig Leith, out of which the aforesaid formal New town has been built. It is not so extensive as those of Rome and Syracuse, but the excavations, instead of straggling along for several miles, having been confined to one spot, form an enormous amphitheatre, 250 feet in depth, and of just proportionate width, all hollowed out of the living rock! In this area, with very little additional carving, a million of people might readily be accommodated with seats; and I never looked at this stupendous indenture in the earth's surface without thinking of the noblest amphitheatrical buildings ever erected above its level, I mean the Coliseum at Rome.

Finally, to wind up this catalogue of quarries, I may

call the attention of tourists to the excavation from which the beautiful Abbey of Melrose was supplied with materials for its construction. This curious spot is rendered of surpassing interest in my eyes, from its having been pointed out to me by Sir Walter Scott himself, during a long walk which I had the honour and happiness to take with him one day along the banks of his favourite Tweed. While he expatiated on the motives which gave rise to the building before us, and traced its rise, progress, and decay to the same causes which first raised up and then broke down the wealth and power of its founders, I could not help glancing my eye to the walls of his own fantastic Abbotsford, nor speculating on their present and future history, and thinking with what interest, many centuries hence, the quarry might be sought for which furnished what few stones may then be left standing one upon another, of the habitation of the good and Great Unknown!

CHAPTER VI.

THE TOUR OF MOUNT ETNA.

As we approached Catania, we could distinguish very plainly at each end of the town, a broad black wall of lava, two streams well known in history—one of which destroyed the mole, and the other overwhelmed a great part of the city. Notwithstanding this, and fifty other examples, the inhabitants of Catania, and, indeed, all round the foot of Mount Etna, like the Neapolitans who are similarly circumstanced on the flanks of Vesuvius, appear quite unconscious of their danger. They even show off to strangers, with the greatest interest, such portions of the ancient submerged houses as the accidental course of the stream has left visible, peeping from under many fathoms of solid lava! This curious sight, and various other considerations, determined us to make the tour of the base of Mount Etna before going to the top; and we should have set off at once, had it been in any other country. But in Sicily, though to the eye the whole land is overspread with plenty, no such liberty can be taken, and the person who sets out even on such a trip as we proposed without a well-stored wallet, will certainly find his pleasures sorely abridged. We accordingly landed our trusty steward Giuseppe, and packed our basket with tea, sugar, rice, bread, pickles, sauces, cold fowls, and a huge beefsteak pie, which, though we reckoned upon it as our principal stand-by, failed us sadly.

Before starting on our expedition round what is called, naturally enough at Catania, the Mountain, though every where else in Sicily it is styled Mongibello, we resolved

to take one good long night's rest. The night was long enough—but the rest proved nothing, from our having unfortunately arrived at the moment of one of the noisiest of those noisy festivals in which the Sicilians delight, and which, as we read in a very learned and ingenious essay, have descended to them from heathen Rome with extremely little variation in point of form, the only difference being in the named and professed object. In former times, the feasts were held in honour of Mars, Bacchus, Apollo;—in modern days, the Virgin, or some saint from a calendar as copious as the old Pantheon, supplies the excuse—the real purpose in both cases being amusement. As soon as the night set in, we were entertained—or I should say, horribly disturbed by a series of processions, bands of music, fireworks, and above all, by the most confounded clatter of church-bells that ever cracked the ear of mortal man. These distracting noises were mingled with the sound of human voices from the thousands—I may say tens of thousands of people assembled in the streets, all talking or laughing, or bawling to one another, at the full stretch of their lungs—some in anger, more in mirth—but all in high spirits, and under a blaze of torches and other lights. Such a Babel I never met with before. Sleep, or rest of any kind, was totally out of the question!

We got up at four in the morning of the 9th of June, in hopes of getting off by five, for the Sicilians fancy it is so hot that they cannot travel in the middle of the day; but our coachman, who had been keeping the festa all night, did not make his appearance till six, nor get under weigh till seven. It cost us five hours and a half of the most rugged roads to reach the town of Adernò, which though by no means an insignificant place, on the south side of Mount Etna, was no more known to us before that morning, than Misterbianco, Paternò, Liccodia, and Biancavilla, besides the extensive ruins of a Phœnician town, half swamped in lava and ashes. Nothing could exceed either the grandeur or the beauty out of doors, or be more comfortless within. At the best hotel in Adernò, and in the best room—for we had all to

ourselves to choose from—the furniture consisted of two broken-down bedsteads, without a trace of posts or curtains—three chairs, one deal table three feet in diameter, sashes without glass, and floors without mat or carpet. Fortunately we had taken the precaution of bringing an iron bedstead and mosquito curtains, not to mention sheets sewed into the form of a bag, which is the only barrier against the nocturnal enemy so prevalent in Sicily. For the rest, the profound stillness of the country village proved a delicious contrast to the uproar of Catania; though the sound of the bells of Santa Agatha still rung in our ears.

We made an expedition in the cool of the day to the banks of the river Simeto in search of a curious scene described by Mr. Lyell, in the first volume of his *Geology*,* where he speaks of a stream of lava which had flowed across the bed of the river a couple of centuries ago, having been cut through by the waters of the torrent. We searched for the spot in vain for some hours, and returned much disappointed and fatigued by a severe scramble along the banks of the river. Geologists should never forget, in describing such a place, that it is necessary to give the most exact sailing directions; otherwise those who follow and wish either to verify their statements, or to satisfy themselves by the testimony of their own senses, are apt to spend a great deal of time to no purpose. Our driver, with the ready impudence of his class, pretended to know all about the very facts described by Mr. Lyell—so off we set, and bowled down at a great rate for several miles of the valley, till we reached a bridge and aqueduct, across which having driven, our treacherous guide set us down, and pointed out the way we were to take. But we soon found ourselves completely jammed up, partly by the stream, and partly by walls of lava covered thickly with sweet-smelling brushwood and innumerable flowers. As we were scrambling among the rugged stones, at a spot where no soil was visible, we came upon a group of the most

* Page 339, vol. i., 6th edition, 1840.

magnificent pink azelias growing wild in bushes, greatly larger than are to be found in the most successful green-houses in England.

Another incident amply compensated for the trouble of our unsuccessful scramble. As we were driving along, we fell in with a party of Sicilian shepherds travelling towards the sea-coast. One of these was playing what I suppose is the celebrated Doric reed mentioned by ancient writers. It was formed of three pipes made of the common cane to be seen growing everywhere in that country, from which he produced really very sweet music. Three hours' drive next morning brought us to the town of Bronte, from which Lord Nelson took his title as a Sicilian Duke. The estate attached to the title lies near the town, and both were very nearly obliterated by a flood of lava in 1832; a fate which the hero would have smiled to think of had he visited his property, which I believe he never did. About twenty months before our visit, the inhabitants of Bronte were thrown into the greatest terror by an eruption of Etna, in the flank just above them, from an opening in which a stream of lava came almost upon their houses. Had it not stopped when it did, it must have gone right over the town and smashed it as easily as a broad-wheeled wagon would do an old woman's basket of eggs.

Supposing the people and their effects out of the way, I can imagine no more curious or interesting sight than a stream of lava moving at the rate of a foot or two in an hour, gradually driving down, crushing, and finally swallowing up a whole town, house after house, street after street—churches and all, and leaving not a vestige behind! On propounding this speculation to the guide, he looked at me as if he thought me a monster worthy of being thrown in the crater; and shaking his head, remarked that after I had seen the effects of a lava stream, I might probably change my opinion.

In the mean time we followed up the course of the valley above Bronte, till we came to the end of the stream of lava which had so lately threatened the town.

We found it about a hundred or a hundred and fifty feet deep, and perhaps one third of a mile wide; the outer surface or crust consisting of huge piles of broken masses of scoriated lava as black as coal, the whole scene being very dreary and desolate to look at. This desolation was rendered more striking by the corners of gardens, ends of walls, bits of corn-fields, peeping from underneath the lava, all burned up and destroyed. Every thing indicated the irresistible nature of the fiery torrent, and foretold too surely the fate, sooner or later, not only of this fated spot, but of Randazzo, Catania, and all the rest, which must, in turn, be overwhelmed again and again as they have been before. Of all the towns, however, at the base of Mount Etna, this poor Bronte struck me as being the most inevitably doomed to speedy destruction; for it lies in the bottom of a valley, already wellnigh choked with old lava streams, to which it has served the purpose of a pipe or canal—and it now only waits for one more good stream to fill it up entirely, and destroy its character of a valley altogether, burying the place fifty fathoms under the surface! We might indeed say, on looking at the wretched town, that it will be no great loss when such a catastrophe occurs; but this sentiment is probably not shared by the inhabitants, who having almost all come back since the recent alarm, we saw them at work again as cheerfully and unconcerned as if old Etna had gone to sleep for ever:—a happy lot—which reminded us of Pope's lines,—

“The hour conceal'd, and so remote the fear,
Death still draws nearer—never seeming near.”

During our expedition to see the effects of one element, we were assailed by another, and were taught the force of water as well as fire, in modifying the character of this prodigious mountain. A shower came so suddenly and so violently upon us, that umbrellas proving of no use, we were glad to crouch under a block of lava until it passed. In a few minutes all the water-courses near us were filled to the brim, and a thousand mountain torrents careering down its sides, carried all before them.

It is impossible, when wandering among these magnificent scenes, and viewing the surrounding country so rich and fertile, and so beautiful, not to feel, painfully, the contrast between scenery so complete, and a population so much below par. I have seldom, indeed, seen a peasantry more ignorant or more dirty; and I should say, let those who grumble at reforms, or sneer at the march of intellect, go to the back settlements of Mount Etna, or, for that matter, to almost any part of Sicily, or even to many parts of Italy, including his holiness the pope's dominions, and I think they will no longer quarrel with any thing tending to make human beings less like brutes both in mind and person, than too many of the inhabitants of the south of Europe are.

We left Randazzo at seven next morning, and drove a few miles along the road towards the sea, as we had by this time doubled the point, or rather rounded the western side of the volcano, so as to gain the summit of that flank or shoulder which stretches to the northward and westward. At a spot agreed upon, I found a mule waiting for me, which I mounted, and proceeded on an excursion impracticable for a carriage. My object was to visit a spot pointed out to me by Mr. Lyell, as being probably worthy of examination, near the village of Moyo, where an ancient lava-stream takes its rise and cuts across the river. This stream of lava is marked with great distinctness in Gemmellaro's Map of Etna, as having flowed in the year 396 before Christ—that is, 2236 years ago! How any such event could be authenticated I know not, but I own I was not in the least surprised, when I came to the spot assigned as the locality of this not very recent occurrence, to find the soil so completely covered with vines, fig-trees, corn-fields, walls, and houses,—that it was impossible (for me at least) to make out any stream of lava at all. At the same time I am not so presumptuous as to doubt the accuracy of Signor Gemmellaro, whose experience of such things must have sharpened his observation far beyond that of a person who has looked at volcanoes merely in a popular way, and not, as it were, professionally.

Nothing is more remarkable in the practical pursuit of any science than this kind of difference in vision. I have known very observant and quick-sighted men fail to perceive a double star in the heavens, while to others, more practised, though using the very same telescope, both objects were distinctly defined. The secret often lies in knowing exactly what to look for, and thence knowing how to adjust not merely the focus of the eye, but what may be termed the focus of the judgment, so as to be able to pitch the understanding into such a key that the information may be understood when it comes. I remember once being present at the Geological Society, when a bottle was produced which was said to contain certain zoophytes. It was handed round, in the first instance, among the initiated on the foremost benches, who commented freely with one another on the forms of the animals in the fluid : but when it came to our hands, we could discover nothing in the bottle but the most limpid fluid, without any trace, so far as our optics could make out, of animals dead or alive,—the whole appearing absolutely transparent. The surprise of the ignorant at seeing nothing, was only equal to that of the learned, who saw so much to admire. Nor was it till we were specifically instructed what it was we were to look for, and the shape, size, and general aspect of the zoophytes pointed out, that our understandings began to co-operate with our eyesight in peopling the fluid which, up to that moment, had seemed perfectly uninhabited. The wonder then was, how we could possibly have omitted seeing objects now so palpable.

In like manner I dare say that if Signor Gemmellaro had been with me, or any geologist well skilled in volcanic phenomena, I should soon have been made to see the aforesaid old lava-stream. Single-handed, however, I could see nothing like a stream coming from Monte Moyo ; but I expected to discover some traces of it where it crosses the river, and accordingly I walked, or rather scrambled, down the left bank of the water-course for a distance of three miles,—certainly including that part indicated in the map where the lava is represented as

having crossed over, two-and-twenty centuries ago. But in vain did I hunt; for although I came to several places where the river had cut deep furrows into the very heart of the lava-streams, I could in no instance say distinctly to what particular eruption the part thus eaten into belonged. Nevertheless, I came to many highly interesting features in this curious volcanic panorama, which I recommend any one who cares about the workings of nature to study with attention. At one place I found a broad compact mass of the hardest lava, worn down by the action of the water into a winding trench varying in depth from ten to twenty feet, and from six to eight feet wide, and even beginning to scoop out the gravel-bed lying under the lava; but whether or not this was the identical lava-stream I was in search of, I could not tell.

The truth is, that whenever, by the agency of running water, or by rents caused by earthquakes, or by upheavings or subsidences caused by volcanic expansions and contractions, the internal structure of Mount Etna is exposed to view, we discover that stream after stream of lava lie in endless, though confused superposition. Some appear to have flowed from near the top, and may be traced for many miles: others seem to owe their origin to mouths or craters far down the sides; but by far the greater number, though abundantly distinguishable from one another by their colour and texture, can be traced to no specific source. The great internal caldron from whence they have all sprung, we know, lies deep in the bowels of the earth; but no one, I think, can form a just conception of its capacity unless he goes round the mountain. To view it from one or two points teaches but little,—for the size of the streams of lava of which the whole mountain is made up, when they are viewed end on, cannot be estimated. But when the circuit of the base is made, all the external coating of all the latest great lava-streams is passed over; and though this journey is necessarily one of constant ups and downs, it is eminently instructive as to the manner in which the mountain has been gradually formed by successive layers of melted rock, interstratified at many places with

layers of dry ashes, or of tufa; a material consisting, I believe, of volcanic mud formed of hot water, cinders, and ashes.

As it seldom happens that any two adjacent streams of lava are exactly of the same colour originally, or of the same degree of hardness, the action of the weather upon them in the lapse of centuries is very different. Some resist the elements, and remain for a very long period of years as black and unchanged in appearance, as when they were first ejected. Others in a tenth part of the time are decomposed and reduced to a rich black soil, so as to yield crops of vines, figs, and Indian corn, —while some merely exhibit a surface covered with yellow and white lichens. All these, and many other interesting varieties, can be seen only by means of the tour which I am recommending. It has, besides, two other very considerable advantages, which to persons who take an interest in mountain scenery and the excitement of mountain excursions, are of some moment.

The first is, that both the summit and sides of the volcano being viewed, in succession, from every point of the compass, a correct idea may be formed of the shape not only of the cone at the summit, but of the different ranges or botanical regions into which the sides are divided with wonderful exactness of outline: and secondly, opportunities are afforded at a hundred different stations for ascending the mountain, along the tops of the ridges which have flowed from the higher districts. A geologist in this way, on coming to a stream of lava of which the component parts are interesting, may readily follow it up to its source; or if the object be merely picturesque scenery, any given point may be reached by travelling along the radius which leads to the centre. He will also have it in his power to select for special visits any one or more of the eighty conspicuous and highly interesting minor cones which adorn the flanks of Mount Etna, but of which only one, viz. Monte Rossi, has been produced within the times of authentic history, —“Even this hill,” says Mr. Lyell, “thrown up in the year 1669, although 450 feet in height, ranks only as a cone of second

magnitude. Monte Minardo, near Bronte, rises even now upwards of 700 feet, although its base has been elevated by more modern lavas and ejections.* There can be no doubt that by far the most interesting single excursion, to any volcano, is always to the great cone at the top, for many reasons: still I should venture to recommend every person who has leisure for the undertaking first to go round the base of the mountain—as he will acquire during that tour such a degree and such a peculiar kind of knowledge of many of its component parts, and become so familiar with its aspect on all sides, and see it lighted up by the sun's rays at such a variety of angles, that when, eventually, he stands on the highest apex, he will feel himself at home, and so familiar with every thing he sees, that his pleasure will be tenfold what it would have been had he merely climbed to its summit in the ordinary way.

To those, indeed, who go up Etna merely to *say* they have been up, of course all this does not apply, for it certainly requires the expenditure of some considerable time, entails additional expense, and must be accompanied by a good deal of roughing and other discomforts, all of which are serious objections to those who care nothing about the matter. But to those who in their hearts love mountain travelling, can really feel the beauties of mountain scenery, or who take delight in studying the actual structure of the great globe which we inherit, and wish to see its strata coming fresh and fresh from the hands of the Almighty, and who perceive in this his stupendous handiwork only knew and increasing motives to admiration and love and gratitude, such petty drawbacks are as dust in the balance when weighed against the refined enjoyments of such a noble journey as the tour of Mount Etna.

On returning to the carriage after my ineffectual trip to the Moyo, we drove along to the eastward towards Giardina—a most beautiful line of road, as interesting for its scenery as for the singular display of minor cones,

* Principles of Geology, Vol. II., p. 207. 6th Edition.

and their attendant lava streams, which have been accumulated in vast numbers at this spot, as if it had been a weak point in the side of the volcano. It is one of the best stations, also, from which to include in one view the complete line of the great cone at the top—the barren region beneath it—the wooded belt—and, lastly, the fertile and cultivated district through which the road passes, and where the inclination is scarcely perceptible. In our course that morning we traversed an oak forest, of which every tree, without exception, was stripped of its leaves by an insect which, oddly enough, left the adjacent forest of chestnuts and walnuts entirely untouched, as well as all the fig-trees, and several others. It looked as if the oaks had been doing something wrong, and been punished accordingly.

The first view of the Mediterranean, from the crest of the northern shoulder of Mount Etna, looking as blue and beautiful as ever, is in grand keeping with the rest of the scenery, all of which is pleasing. On the south every thing is volcanic, and is strongly marked with that peculiar character; but on the north, a far older range of formations—geologically speaking—bounds the view, a distinction obvious even to the least experienced eye. In front, between the ridge and the sea, lie towns and villages, closely matted up, chiefly with olive-trees. Over this enchanting and truly Sicilian landscape, the cool sea-breeze scarcely reached so high as we stood, though we could see it ruffling the surface of the water in the distance—and much we sighed for it, to fan away the sultry heat of the morning sun.

As it was only four o'clock when we came to Giardina, on the sea-shore, we had still daylight enough left to visit the celebrated town of Taormina, the Tauromenium, I believe, of the ancients. It is perched on the top of a high cliff, and stands so near the edge, that a series of the finest views imaginable are commanded by it. From the ground immediately behind the ruins of a magnificent old theatre we could see far up the straits of Messina, the coast of Calabria, and all the intervening bays—not to speak more of the grandest feature in the

prospect,—with countless towns and villages dotting the southern shore as far as Catania, with Cape Passaro and the high grounds about Syracuse in the distance. My eye was most attracted to the steeple of a church, which the guide assured me was in the centre of Catania, as I bethought me of my little party within the sound of its bells. Immediately inland of us rose sundry abrupt mountains, with escarpments so steep as apparently to threaten to topple down upon us; and what seemed very odd, in such a fearful assemblage of precipices, beheld a town built on the very edge of the steepest rock amongst them—Mola, I think, it is called. It looked as if any child, toddling half a dozen yards from home, must inevitably fall over a precipice five or six hundred feet high! I don't remember to have seen any such places inhabited except in some of the valleys of the Alpine passes, where towns may be seen perched, like eagles' nests, on the tops of cliffs, which, it might be thought, only a bird could reach, and where no bird but one with strong nerves like an eagle, would choose to remain.

Next day we reached Giarra, a considerable town on the eastern or sea-side of Etna; and such was the effect of contrast, that we could scarcely fancy we were on the same island. I well remember when travelling in the United States of America, that we thought the comforts and accommodations of New York and Philadelphia, when we first visited those cities, rather indifferent; but after we had been living for some months in the backwoods, and then returned to the self-same houses, the fare seemed to have so wonderfully improved in our absence, that the people, not knowing what to make of our raptures, fancied we were quizzing them. In like manner, although we had been roughing it in the backwoods of Mount Etna only three or four days, we were quite delighted with the luxuries of the coast road. At the best inn at Randazzo, for example, they managed to muster for our use only one tumbler, one cup, and one knife—and not a morsel of eatable bread was to be found. Now, as this was but a type of the other inns, at which, in consequence of the difficulty of getting along, travel-

lers must stop, I cannot too strongly impress upon persons wishing to make the tour of Etna, to supply themselves beforehand with every thing—just as if they were setting out on a sea voyage. If they do not, they will be apt to find most, if not all, the pleasures of the trip swallowed up in the bodily annoyances of hunger, or dirty and insufficient diet, or both. Whereas, by taking such a well-provisioned basket as our landlord at Catania, the celebrated guide Signor Abbate, provided us with, we never fell short but once—and that was, when some myriads of ants, like the Huns and Goths overrunning Italy, made an inroad upon our beefsteak-pie, and demolished more than half of it and ruined the rest, before their invasion was discovered!

At Giarra, we found nice hot bread, just out of the oven, excellent milk (a thing we had not seen once during the tour), and, above all, the most delicious fresh fish, drawn out of the water under our own eyes, as we drove along the beach. "Hunger," says the proverb, "is a good sauce;" and so it is; but those who have not tried the experiment, are not aware that, while hunger sharpens the edge of appetite, it likewise renders the palate so peculiarly nice and discriminating, that it is just then, more than at any other time, that the discomforts of bad quarters and the refinements of such as are good, come to be most acutely felt. It is then, too, that choice fare and good cookery are most thoroughly relished, and that bad or ill-dressed dishes are rendered doubly distasteful.

It is from Giarra that people generally proceed who wish to visit the celebrated "Castagno di Centi Cavalli," or chestnut of the hundred horses, so called from the belief, or assertion, that this number might find shelter under its branches. Certainly it is a wonderful tree, whether it be traceable to a single root, or whether it be in fact five different stems, so closely packed as to resemble one huge, but riven trunk. On this point the learned are so divided, that much may be said on both sides. What is infinitely more interesting than the tree—curious as that is, independently of all speculation—is

the ride to it, which is one of the most varied and beautiful which even that region, so fertile in fine scenery, can produce—since it combines, in perfection, the three chief requisites—bold mountains, a country well clad with foliage, and the open sea.

Of all the expeditions, however, which may be undertaken on the sides of Mount Etna, there is none comparable for interest of every kind with that to the Val del Bove, a scene so grand, that it is quite strange it has been so little visited. Indeed, until those most stirring of travellers, the geologists, made the discovery, it was scarcely known to the inhabitants, and not at all to the world. Mr. Lyell believes that Dr. Buckland was the first English geologist who examined this valley with care, and reported it to be more worthy of attention than any single spot in Sicily, or perhaps in Europe.

As I was aware that the expedition would occupy the whole day, I gave orders to be called at half-past three, in hopes of getting away at four; but all things move so slowly in Sicily, that, in spite of every exertion, it was nearly half-past five before I got off—such was the botheration of guides and donkeys, landlords and lacqueys. The Val del Bove is a huge, steep-sided, circular scoop, or depression, on the eastern side of Mount Etna, about five miles in diameter, and from three to five thousand feet in the height of its bounding precipices, which are in most places nearly perpendicular. These enormous walls or cliffs are formed of layers of lava of a great variety of thicknesses, interstratified with beds of tufas, breccias, and volcanic ashes of different colours and degrees of fineness—all sloping downwards to the sea, at an angle of from twenty to thirty degrees. These strata have evidently been produced by successive eruptions from or near the top of the mountain in past ages; and it seems all but demonstrable that they must, at one time, have been continued quite across the Val del Bove, before that part of the mountain was allowed to sink down, probably from some internal vacancy being formed in the reservoir of melted lava beneath, deep in the centre of the volcano.

The faces or perpendicular sides of this enormous natural amphitheatre, are almost everywhere marked by vertical walls of lava, which intersect the strata. These dykes, as they are called, of which there are vast numbers, usually stand out in relief, and sometimes many yards beyond the cliffs which they traverse. This is caused by their being composed of harder materials than the strata through which they pass, so that the action of the elements tells less upon them. They vary, Mr. Lyell tells us, from two to twenty feet and upwards in thickness, and are composed, some of trachyte, others of compact blue basalt, with olivine. The floor or platform of the Val del Bove, is paved in the most rugged fashion of nature's work, with innumerable currents of lava piled one upon the other, and all seeking, like water or any other fluid, to find a lower level. Some of these streams have stopped short in the valley, from their sources or craters ceasing to yield any more melted lava. Others have only been partially arrested in their progress, or turned to one side, by the cones of still more ancient eruptions, which "monticules," it may be observed, are in some instances all but swallowed up and lost under a succession of fresh currents of lava—destined, no doubt, in process of time, to refill the whole valley, and make it, as it formerly was, flush with the rest of the mountain side. In the mean time, some of these currents have made their way right across the Val del Bove, and have poured themselves in cascades, which it must have been terrific to have witnessed, over the fertile lower regions, spreading utter ruin and desolation wherever they passed. As long as we confine our view to the upper parts of the valley, and examine these torrents of lava—some of which are several miles in length, and three or four hundred feet in thickness—we look at them as characteristic of the region, where all is black and bare, without a trace or possibility of vegetation. But when we observe such fierce-looking monsters traversing the gentle slopes below, topping with merciless sweep the vine and orange-clad knolls, and obliterating hundreds of acres of corn-fields, demolishing chestnut

forests, careering over and utterly crushing large towns, filling up valleys, and burying hills, we feel a totally different emotion. At all events, I must own that I never, by any amount of experience, became reconciled—or even accustomed to the sight of a lava stream—as black as pitch, smoking hot, rugged, shapeless, totally without verdure, and apparently without a chance of ever bearing a blade of grass—intruding itself amongst gardens and green fields, and ruining the graceful beauties of a southern landscape. It would not be more incongruous to tumble a cart-load of live coals into the midst of a drawing-room—upsetting and breaking to pieces the supper tables, burning up the carpets and chairs, and driving the half-suffocated company into the streets for shelter.

Your philosopher steps in and tells you that all this is for the best, and that in due time these very streams of lava and showers of dust, the cause of so much present mischief, become the sources of a far greater fertility than existed before, and that new towns and villages, more wealthy and beautiful than their buried predecessors, will rise above them: but I could never find the stupid Sicilians much influenced by this reasoning when the growling of the volcano threatened an outbreak.

I shall only say further of the Val del Bove, that, as I am not acquainted with any scene in the world better fitted to strike the mind with awe, as a mere spectacle exhibiting the grander works of nature, or more calculated to yield, upon careful examination, interesting scientific information, I should venture strongly to recommend any one at all curious in such matters not to pass it by, as too many do, for objects of comparatively small value.

We reached Catania on the morning of the fifth day of our tour, having completed the circuit of the Mountain, which I believe is ninety miles by the road we went, without counting the occasional digressions we made to Taormina, the Simeto, the Moya, and the Val del Bove, which may be reckoned to have added twenty or thirty

miles more. I felt so little fatigued, however, that on the same day I set out with my children to visit the Cyclopean islands of the poets, called now, I do not know by what process of language, the Fariglone Islands. We made the outward voyage in a letiga, as far as the village of Trezza, where we crawled out of our cramped conveyance and took a boat, in which we made a most successful excursion to the spot where old Cyclops forged the bolts of Jove. The specific purpose which I had in view, was to examine into the fidelity of the published drawing of one of these celebrated islands, which a friend had expressed some doubts about—and I fear it was in no very Christian spirit that I felt gratified by finding the drawing erroneous, as it gave me an opportunity of doing the thing afresh with instrumental accuracy, by means of the camera lucida.

During our examination of these pretty little islands, a fresh sea-breeze had sprung up, which at once induced us to put our helm up, and we bowled away so merrily before the wind, that in an hour we reached Catania.

CHAPTER VII.

THE ASCENT OF MOUNT ETNA—PROPOSED PANORAMA OF THE VOLCANO.

So far as I am able to judge from what I have seen or been told of the climate of Sicily, I should consider it the best in Europe for a delicate patient: and yet, by reason of a strange prejudice on the part of the natives, that island is rendered almost entirely useless in this respect. They have unfortunately taken a notion into their head, I believe without any foundation, that consumption is not only occasionally infectious,—but that it is always so—even worse than the plague or any other

disease. Consequently they will not admit a person suspected of having a tendency to pulmonary complaints into their houses. If any one afflicted with this malady should die among them, a ban is put on the house, its furniture destroyed, and no one allowed to inhabit it for a period of many months. As this is ruinous to inn-keepers and inconvenient to all, and as every native firmly believes in the truth of this persuasion, it becomes impossible for any consumptive patient to find house-room in Sicily. I have even heard of instances of such persons being allowed to perish in the streets or in the country roads, to which they were driven by the excessive terror of the inhabitants.

It is well that this should be generally known, as it might lead to great inconvenience were a family to reckon upon finding rest in Sicily when in search of climate. There is another reason, however, against choosing Sicily—at all events Catania—for a place of rest for an invalid, which, though it may seem ludicrous, is really a substantial objection. I allude to the noise caused chiefly by the church-bells, and especially by those of the church of Santa Agatha, the painful remembrance of which I shall carry in my ears to the grave, whatever other sounds may disturb me in the interval. Of all the noisy places, indeed, in which it has been my lot to spend any time, Catania is the most so. Naples is pretty well; but there the distances are greater, and it is possible to get tolerably out of the reach of the ringing; but at Catania this is impossible—for the churches are so numerous, and are placed in such a manner, that you cannot escape from the sound of one, without falling within the range of another—as if they were a series of forts or redoubts, erected for the express purpose of battering your peace. To me indeed this nuisance became so intolerable, that I felt as if no consideration on earth could induce me to live in the place. Ten days of St. Agatha would put me either out of the world, or into a mad-house! I dare say it might not be impossible to bribe the fathers of any given church or convent, to intermit the ringing, or to soften it, for a

night or two, should one's friend be dying in the hotel opposite. But no wealth or power on earth could suffice to check the eternal uproar in the streets—the music—the shouting—the popping of fire-works—the rattling of carriages. What it may be in winter I know not—but in summer it would seem as if the whole population lived out of doors, and occupied themselves all night, and every night exclusively, in making a noise.

At all events, on our return from the tour of their mountain, we found them just as hard at work at their festas as when we left them; and sleep being totally out of the question, we repaired to the streets, and after a sufficient dose of the wearisome and tawdry folly of the processions, stepped into the church of Santa Agatha of which the bells had plagued us so dreadfully. We found it brilliantly lighted up, and, as we had been promised, also a grand concert of fiddlers. Instead of sacred music, which in our innocence we had hoped to hear, we were entertained with the Tarantala, the well-known Neapolitan dance—the inspiring air of which, acting on the volatile nerves of the gay Sicilians, I thought would have set the congregation—so to call the crowds who came to hear the music—into a lively movement within as without the church. I suppose the director of the music thought so too—for he stopped suddenly, and directed the band to play the overture to the opera of *Il Turco in Italia*—and so they went on all night! The only time, in fact, when there occurred an interval of repose was in the middle of the day—from noon till about four or five, when the church and convent bells ceased to peal—the organs breathed no more—and the streets from end to end were deserted—except here and there a stray dog, courting the shady side, or by a blundering Englishman, poking along, in the sun, busily employed in smoking a cigar, and wondering how the people could waste their day in so idle an occupation as sleeping!

At three o'clock in the afternoon of the 15th of June, we set off from Catania to ascend Mount Etna, an excursion of the greatest interest, but excessively fatiguing,

and one which ought to be made according to some better-arranged system of operations than we adopted; and this is especially necessary where ladies are of the party. Such arrangements, it is true, are by no means easy to make, owing to the peculiar circumstances of the stages and their relative distances, and the variety of objects of curiosity, which require to be seen at certain epochs of the day. Unfortunately it happens, that a knowledge of these things generally comes too late, that is, after the journey—for it is a complete journey—has been gone through. The adventurers are then worn out by fatigues which might have been avoided, and have only the mortification of looking back to misapplied opportunities, by which, under better instruction, they might have profited.

This arises, partly, no doubt, from the nature of things, partly from the vast scale of every part of this great volcano, but mainly, I believe, from the absence of good guides, which again is caused by the comparatively small number of travellers who visit Sicily. In Switzerland the guides form a numerous class, owing to their services being so constantly required, that the profession becomes a lucrative one, worthy of the exclusive attention of the cleverest and most intelligent peasants in the country. Under their pilotage, whether the excursion embrace the whole range of the Alps, or be limited to a single valley, all things are calculated beforehand, and regulated with a due regard to time and season. The capabilities also of enduring fatigue of the travellers are taken into account, as well as their tastes and wishes, in respect to sight-seeing, sketching, geologizing, or merely enjoying the journey for the journey's sake. Thus, amidst the endless variety of Swiss scenery no person need be apprehensive of over-fatigue—or that he will be deprived of the sight of any object worthy of his notice, provided he relies on the experience of his guide, who, in truth, becomes in time a companion and friend, who shares all his interests, with a manliness which is quite peculiar to that class and country.

But in Sicily nothing of this kind is to be met with,

and as we could not prevail on Abbate, the only really good guide we had heard of, to accompany us to the top of Etna, we were left in the hands of persons who, from not making the proper allowances in the masterly style of the Swiss guides, not only greatly augmented our fatigues, but deprived us of advantages which, had we known the way properly, we might have enjoyed. It strikes me that a good deal of the evil arising from this want of experienced, or at all events of reflecting and skilful guides, may be remedied by distinct instructions as to the best mode of making the journey; and I shall therefore endeavour, after I have described our trip, to draw up a memorandum of what I think we ought to have done, had we on setting out possessed as correct an idea of the difficulties of the undertaking as we had when we returned.

We set off from Catania at three o'clock in the afternoon, in that vilest of conveyances a *letiga*, in which, as I have already described, two people are carried in a box between two mules, as barrels of wine are carried in Spain, or as ladies and gentlemen are carried by men in sedan chairs in Edinburgh. It cost us three hours to reach Nicolosi, from whence, after a very meagre repast, in the shabbiest and most wretched of inns we had yet met with even in Sicily, we started for the Bosco, or wooded region next above that village. At Nicolosi, we fortunately fell in with Signor Mario Gemellaro, one of the most intelligent and scientific men in the island, better acquainted, perhaps, than any person whatever, with the phenomena of the great volcano, in the careful investigation of which he has passed his whole life. It may be called improper, with such work in hand as we had, to sit chatting, instead of breasting the mountain; but the charms of the conversation of a man of parts and genius, highly informed, and willing to discuss the most interesting topics, on the very site of their action, proved more than a match for the scenes themselves. He furnished us with the best guide he could lay his hands on; but he unfortunately was both stupid and old,—so that he had neither skill to direct and instruct us, nor strength

of limb to help us, and having long outlived all interest in his topic, proved himself at last, as he must have done all his life, a heavy blockhead. Had he known his business properly, he would have stimulated us to get on briskly, instead of allowing us to loiter; and this, I may mention, is the chief point to be avoided in the ascent of Mount Etna, where the objects of interest are multifarious, but the distances so very great, that if we allow ourselves to be seduced into delays by the passing scenes of enchantment, we are lost.

Another cause of detention, of rather a disagreeable kind, occurred before we reached the Bosco. It had been a question between the letigero and us, whether or not he was bound by the contract which Signor Abbate had made, to convey us a part of the way through the said Bosco, and the discussion, or dispute (for both in Italy and in Sicily all such differences between man and master speedily degenerate into squabbles), had reduced itself to the point of my declaring positively that he should not be paid one taro unless he carried us to a certain stage of the Bosco named by Signor Gemellaro. The legitero shrugged his shoulders, and seemed to submit, though I have no doubt the rogue smiled internally at the consciousness of his power over us, and the impotence of our threats. On we trudged, however, for some time; but when we had reached within about a mile of the edge of the Bosco, and just as we, reckoning without our host, had agreed that it was not possible to upset a letiga, the first mule (prompted, I have no doubt, by his no less mulish confederate the letigero) stumbled and fell over on his broadside. Of course our vehicle came down with a crash likewise, the bottom first taking the ground, like the keel of a ship on a reef of coral. The lava gritted for one moment under our weight, most ominously, and in the next we were laid over on our beam ends on the hard ground. Fortunately we had presence of mind enough to keep our arms within the apparatus, otherwise they might have been broken, and at all events they must have been finely excoriated against the hard and ragged surface of the rock.

Of course there was an immediate rush of all the attendants to our assistance; and the very fellows who had wilfully caused the accident, now encumbered us with so much help that we suffered fully as much in the operation of being lugged out as we had done by the fall. Among these over-busy gentlemen, there came to us a lad who had charge of the mule furnished with a side-saddle, but which animal had a trick, the instant he was let alone, not only of lying down, but of rolling about. Consequently, as soon as his master left him, down he lay; and the first sight we beheld, after creeping out of our prostrate box, was the delighted mule, with all four legs in the air, and the fine new English side-saddle, which an obliging friend had lent us for the occasion, cranching to bits against the stones! A few sound thumps of the muleteer's pole brought my gentleman to the perpendicular again; but as it proved a job beyond the reach of my nautical resources to repair the broken saddle, the poor rider paid dearly, both in going up and in coming down, for the inconsiderate promptitude of the mule-driver, who flew to our rescue.

We now resolved to have no more to do with the letiga, which at any rate could not have gone much further with us, but it was eleven o'clock before we were again under weigh. Our guide, mounted on the sumpter-mule, carrying provisions and cloaks, led the way, having an assistant by his side, with a lantern in his hand. Next came the rider of the mule, with the broken side-saddle, the bridle of which was held by an attendant. Then I followed; and the rear of our cavalcade was brought up by a stray English young gentleman, who being quite adrift, had joined our party and agreed to share fortunes. At the end of the Bosco, which is one of the noble oak forests by which the mountain is braced, we were made to stop at a little uninhabited hut in order to feed the mules; a support, the guides said, and said truly, both man and beast required for the formidable road we next entered upon. Although we hurried, or rather tried in vain to hurry, these most sluggish of people, being fearful that by all these delays we should lose

the sight of sunrise at the top of the cone, it was midnight before we got off again. We had then three hours of such climbing as I never encountered in my life before, over rugged streams of lava, interspersed with occasional patches of snow, and now and then, for a variety, beds of loose rolling stones. This was all bad enough, and very fatiguing, even when the moon was up; but when, between one and two o'clock, it sunk behind the ridges of lava on our left or western hand, our course being very nearly direct towards the north star, this slow and difficult progress became any thing but pleasant. The miserable flickering lamp proved a sorry substitute for the jolly moon, and perhaps did us more harm than good by glaring in our eyes. Presently, having left far behind us the last traces of vegetation, we entered the region of perpetual sterility, and our toes became so cold that we could have cried. Still, even this was nothing to the fatigue, the darkness, and the uncertainty of our path. The guide, stupid and cold by nature, became more frigid and dull by the effect of the night air, and in spite of all the aids we could receive from association, and the real magnificence of the scenery, which though much obscured was still sublime, we felt worried and wearied to the last degree of endurance long before we reached the Casa Inglese. This is a small house or hut, built by the English officers in 1811, when Sicily was occupied by our troops, in order to keep it from the grasp of the French, then masters of Italy. It stands at the foot of the great cone of Etna, and serves the purpose of a place of refuge for travellers in bad weather, as well as a sleeping-place for those who reach it in the early part of the night, with the intention of climbing to the top in time to see the sun rise. It may be well to mention, in passing, that persons having this intention should send up, beforehand, not only beds and blankets, but a good store of firewood.

Owing to our having lost so much time by the way, we had the mortification of discovering some touches of the coming dawn, even before we dismounted, half-frozen, at the Casa Inglese. But tired though we were

in body, and beginning to feel some of that faintness, like that of sea-sickness, which many persons experience who mount suddenly to great elevations, our spirits were so high, that off we set on foot as fast as our cloaks would allow us, for the bitter cold rendered them absolutely necessary. After crossing a broad field of snow, we made a slight detour to look into several mouths or chimneys, as they may be called, of the quiescent volcano, from whence sulphurous vapours issue with a noise resembling that from the bellows of a blast furnace. On approaching the edge of these "fumeroles," we saw a bright light from the internal fires of the mountain, and heard a roaring and very terrific bubbling sound. The effect was not a little heightened by the sight of similar vents at a hundred other different spots, all yielding either hot steam, or fumes of sulphur, or smoke, or all three; the whole indicating that, although the volcano was not in what is called action,—that is, spouting forth flames and volumes of lava, and showers of stones and ashes,—it was what Humboldt calls "unextinct," *i. e.* all ready for a fresh start. While standing on the edge of these crevices, therefore, it was impossible to divest the mind of the possibility of the whole exploding and sending us all spinning to the zenith! But indeed we had little time to speculate on such chances; for as the sun was advancing, by the earth's rotation, at the rate of a thousand miles an hour, it became evident that nothing but great activity and hard pushing could bring us to the summit before the wished-for moment of his appearing above the horizon.

In spite of our hurry, or perhaps in consequence, it was necessary to stop for breath at the end of every ten or twelve paces; and as the footing was among loose ashes, and the wretched sea-sick feeling increased, our utmost efforts brought us only within about fifty or sixty paces of the top, when the sun leaped up from the eastern sea, and long before the plains of Sicily, or even the mountains of Calabria, spread out at our feet, caught the least touch of his direct rays, the whole top of the volcano was bathed in gold. This effect of height we often

see from below, and always admire, but it is very rarely that we are made actual sharers in the anticipated splendour. The physical superiority in level then gives us a feeling of moral elevation above the rest of the world, and mingles with the other sources of interest which crowd about the imagination at such a moment, and amply repay the fatigues of the ascent. What struck me most was the map-like appearance of Sicily, with a considerable part of which, but only round the coast, we had already become familiar. The Lipari Islands, the sea near the Faro of Messina, the ports of Catania and Syracuse, the highlands over Girgenti, and even those near Palermo, and the Mediterranean lying beyond those places, together with an immense range of the Calabrian mountains capped with clouds, but several thousand feet below us—to say nothing of the rich fields of the interior of Sicily spread like a carpet—all filled the eye and rather embarrassed the attention, by bringing at once, into one enormous panoramic view, so many objects widely separated, geographically speaking, never seen together upon any other occasion. It occurred to me at the time, and the accidental use of the word panoramic suggests it to me now, that it might be well worth the while of my friend Mr. Burford, the most accomplished of painters in his great line, to give the world a panorama drawn from the top of Etna, which I feel assured would prove not only extremely attractive, but be more instructive than any other species of drawing, or than any description can ever be, of the extensive and interesting class of phenomena peculiar to volcanoes.

Much as we felt charmed with the beauty as well as the magnificence of the distant scenery, its interest was vastly subordinate to that lying close at hand. Of these the great crater forms so principal an object, that I should recommend the panorama-painter, if he engages in this task, to pitch his tent in such a position as to enable him to represent it minutely. It consists, or did then consist, more of a huge, wall-sided, cylindrical pit, than of a conical, cup-like hole, which we are led to expect from

the name. At the time I speak of (1834), this crater might have measured three or four hundred yards across; though to have engineered its dimensions would have required some ingenuity, especially as the yawning gulf beneath, of which we could not see the bottom, emitted fumes of sulphur, mixed with clouds of steam. Properly managed, this terrific pit might form a most effective foreground to the panorama, though there must always be wanting the local feeling of danger, arising out of the possibility of nature taking it into her head to touch the trigger of the overcharged mountain, and by springing the mine of a fresh eruption, blow the cone, the artist, and his apparatus into the air!

The next object to which I should call the painter's attention, on several accounts, would be the Val del Bove, of which I have already spoken. In the first place, it is one of the most remarkable-looking objects in the volcanic landscape, and, therefore, is what a painter desirous of engaging the attention of the public should certainly avail himself of. In the next place, that enormous valley, or rather subsidence, in the mountain, which in shape, size, and colour is utterly unlike any thing else in the world, is well worthy of the most careful study of the geologist. And as the artist alluded to well knows the importance of correctly reporting the geological features of all his scenes, he would no doubt exhibit the dip of the strata, the form and direction of the dykes which traverse them, and the course of the different lava streams which cross that wonderful and dreary scene. Much useful information might thus be acquired from the picture alone, without the severe labour of an actual inspection of the Val del Bove itself. Besides which, the view, though necessarily imperfect, which must be given of it from the point fixed upon as his centre by the painter, might, and I have no doubt would, tempt both men of science and mere amateurs to visit a scene more fertile in objects of interest than almost any other with which I am acquainted. It is a curious circumstance, that the interest we take in some events depends very much on the recent nature of their dates; and I have invariably

observed that people turn away with comparative indifference from a lava-stream of a thousand years old, or of which the date is unknown, while they run eagerly to see one which has flowed along in one of the years of our Lord which has been distinguished by their own existence in the world. Of this feeling Mr. Burford would know how to take advantage, when he came to represent the two great currents of 1811 and 1819, which cross the bottom of the Val del Bove. Even near their sources these streams must measure a mile across, while they spread themselves out considerably as they advance to the length of seven or eight miles. By watching for favourable lights and shades, caused either by the various angles of the sun's altitude, or by the effect of passing clouds, any such points in the landscape might be rendered as prominent as the taste of the artist, or any scientific purposes, might require.

I need scarcely say that on every side, looking from the top of Etna, similar, or even much larger, streams of lava than those above alluded to, stretching either from the top or from the sides of some of those lateral elevations, which are called on the spot "minor cones," might be accurately represented in a panorama.

In the next place, the very distinct natural arrangement of the mountains into three regions is a feature which it is impossible to render justice to in any ordinary picture, but would tell famously on Mr. Burford's large canvass, if the central point of his panorama were the top of the cone. The upper circle or section of Etna is entirely destitute of vegetation; the lower part of this belt of sterility being distinctly marked by an unbroken horizontal line, as we see in the Andes and other lofty ridges. The frequent prolongation, downwards, of this line of desolation, by the deluges of lava which have flowed out of the higher craters, is, however, a very remarkable feature of this mountain. These, at some places, convert large districts of the next, or wooded region, into as complete deserts as any which we find in the upper parts. Now, all these strange-looking interferences would furnish the panorama-painter

with endless diversities for his colouring. Moreover, he would be able to represent many singular volcanic cones scattered over both the wooded region, and even trenching on that fertile and broad district which extends to the sea on the east side of the mountain, and spreads itself into the centre of the island on the west.

In process of time, as I have already mentioned, these streams of rock, and even the fields of volcanic ashes, become natural gardens, rich in the most luxuriant verdure. But as this process is a very long one, and as the substance which the elements have to work on is boundless in its variety, the kind and degree of effect produced are no less so, and would afford the painter an endless range of colouring in the representation of foliage. Thus many of the beautiful boscos, or forests of oak and chestnut, in the wooded region, are intersected by lava-streams, which have not merely driven over and burnt up every tree in their way, but have scorched and withered every thing adjacent, so as to leave on both sides a broad strip of naked ground, without one tree, or any other trace of vegetable life. In the same way corn-fields and vineyards are treated under the irresistible pressure of these fiery monsters. It is true, every town, hamlet, or single house, will be swallowed up in a little time, geologically speaking, by successive coatings of lava, tufa, and ashes; but when we are actually travelling among these scenes, their inevitable fate is by no means so obvious. When, however, a general view of what has been going on in past ages, and is in progress at this moment, is taken from the summit of the mountain, we discover that the only question lies in the sooner or later; and the panoramic view which I am contemplating, and hope will be executed, from the top of Etna, will make these necessary consequences quite apparent.

It is partly pleasant and partly melancholy to look upon this smiling scene. We are gratified by seeing the unconscious enjoyment of the population, basking in the sunshine of the warmest fertility. But this reflection is almost immediately checked by the certainty that the next year, or the next hour, the whole may be extin-

guished, or rather, set in a blaze ! And although nothing can be more true than that a similar degree of uncertainty hangs over the fate and fortunes of every man, wherever he may be placed, yet the immediate proximity of the instruments of destruction forces the imagination to picture to itself the actual misery of those sudden catastrophes, of which, even in our day, we have had frequent examples. I could not look on the crowded corso of Catania on the evening of a festival without recollecting that not very long ago sixteen thousand of the inhabitants of that city were killed in one instant by the falling ruins of their own houses, shaken down by an earthquake ; and still more recently the greater part of the town has been crushed to pieces under a stream of lava ! A short residence on the spot would reconcile us to all this ; at all events, we should cease to remember or to care about contingencies of uncertain occurrence as to date. But perhaps it is on that account that passing visitors should arrest their feelings as they arise, and study, by giving them verbal expression, to render them practically useful, before their novelty is so worn off that they become blended and lost among the rest of those commonplaces, which have ceased to make any salutary impression on their minds.

The descent of Etna, like that of any other high mountain, is a much easier thing than the ascent, although some people maintain the contrary—a strange doctrine to oppose to the law of gravitation ! It will happen, no doubt, as it did in our case, that when the mountain is not only high, but the way very long and rough, and that people are resolved, in the teeth of common sense, to “go the whole hill” at once, as we foolishly did ; then the paradox becomes a true position. At all events, if the descent be physically less difficult, it is far more difficult of endurance when the body is worn out with fatigue, and the mind, thoroughly saturated with fine sights, and exhausted with the expression of raptures, has lost the elastic power of being sustained by the contemplation of scenery or other circumstances which had previously buoyed it up.

The first halt we made on coming down was at the same hut in the bosco where we lost so much time in going up. There we found a brisk fire ready lighted for us, and such a warming of toes and such a breakfast as we made on cold chickens and tongue I do not remember to have enjoyed anywhere before. At the edge of the wood we relinquished our mules, which poor brutes being fully as wearied as we were, lay down and went to sleep, while we had to stuff ourselves into our old friend the letiga, in which we were shaken about as if, having swallowed a bottle of laudanum, the object had been to keep us awake. Accordingly, more dead than alive, we reached Catania at four o'clock, after twenty-five hours of pretty constant exertion, and without having tasted one wink of comfortable sleep the whole time.

I should recommend any persons going to the top of Etna to consider well their plans before they started, and above all not to fatigue themselves by any previous exertion, but to go to their task quite fresh. If ladies be of the party, I think they should leave Catania at such an hour as to drink tea and sleep at Nicolosi—start an hour or two before daylight next morning, so as to breakfast at the Casa Inglese, at the foot of the cone—then climb the peak leisurely, long after sunrise, and on the return take luncheon and a rest in the Bosco, and so return to a late dinner at Catania. In this way every thing that is really worth seeing will be gone through during the daylight, and there need be no extraordinary exertion. It is, no doubt, a very considerable labour, manage it as we will; but this I think is the way to perform it with the least fatigue.

If, however, it be an indispensable object of the excursion to see the sun rise from the top of Etna, another set of arrangements must be made. The party ought, in this case, to start from Catania so early in the day as to reach the Casa Inglese, at the foot of the cone, before dark, and having taken a couple of blankets apiece, besides an extraordinary allowance of cloaks, make up their minds to the discomfort of sleeping there. It would be advisable also to send on a person some hours beforehand, to light

good fires, and otherwise to clean up and arrange the hut,—taking with him also ample materials for a good hot supper.

The party would then be ready to attack the cone an hour or two before daybreak, regulating the time by the walking powers of the weakest in the company, and only taking care to reach the summit by the time the dawn begins first to appear in the eastern horizon. The moment of the sun's disk showing itself above the sea is, no doubt, the grand object; still I have invariably found, when watching for this splendid phenomenon from great elevations, that the hour, or three quarters of an hour, before the sun's actual appearance possesses a wonderful degree of interest, and amply repays the additional exertion of reaching the highest point in good time. The gradual manner in which the curtain of the night is drawn up, and the enormous landscape exposed to view, from such an elevated station as Etna, is what no imagination can pretend to conceive—no experience in the smallest degree prepare us for. We have the authority of Captain Smyth, the great surveyor, for saying, that the radius of vision from that spot is about one hundred and fifty miles—or, in other words, that the eye takes in, at one view, a range of the earth's surface, three hundred miles in width! It will be easily understood that certain parts of this gigantic panorama enjoy the touches of the coming day long before others. The highest and the most eastern, of course, are the first lighted up—but owing to the shaded sides of all objects situated in that direction being turned to the spectator, very curious modifications take place, and give to those elevated spots which lie to the westward a priority of distinctness in their details which we should not have anticipated. As the fields and towns, and the various indentations of the coast, become visible, and the colours of the foliage begin to show themselves, we are apt to fancy the sun must be close at hand; but it is generally long after this period that he actually appears—such is the surpassing splendour of his rays. This effect is perhaps increased by the clearness of the air at great altitudes.

After the sun had fairly risen, I think the most interesting thing to look out for is the shadow of the mountain, which is flung upwards of a hundred miles over the western country. It is true, its edges are ill defined in the distance, and at some places can scarcely be made out; but still the general effect is very grand, and as the sun gradually gets higher, and the light reflected from the clouds, and from the sky, even when there are no clouds, is distributed over the earth, the parts under the shadow of the mountain become so softened in their tints, as to engage the attention even of those who have least feeling for the beauties of nature.

Were it not for the difficulty, and almost pain, of looking at the eastern side of the circuit when the sun is low, I should be disposed to recommend this moment for the panorama to be painted—for the same reason that the best time for looking at the moon through a telescope is, when only a small portion of her disk is illuminated. The shadows of the mountains are then projected far from their bases, and the hollows on the surface are rendered distinct by one side being cast into deep shade, while the opposite is lighted up. So it is exactly with Sicily when viewed at sunrise from the top of Etna, and with the whole group of the Canary Islands seen from the top of Teneriffe.

On these accounts I should certainly recommend every one to aim at reaching the top in time for sunrise, whatever other objects may be lost in the expedition by forcing that primary measure. For my part, when I next ascend Etna, I intend to make a point of seeing both sunset and sunrise. In order to accomplish this without fatigue, I should start from Catania so very early in the day as both to breakfast and dine comfortably on the road, and, without extra exertion, to reach the top an hour before the sun set; after seeing which, I should return to sleep at the Casa Inglese, and next morning reclimb the cone in good time to see the sun rise.

By this means, the interest of the excursion to the top of Etna would, I think, be more than doubled, without by any means doubling the labour. Every one indeed

knows how very different any country looks when we view it from the opposite point of the compass. Suppose, for example, that we walk or ride eight or ten miles over the hills and valleys of Sicily, and then turn round to retrace our steps, we shall scarcely be able to believe on returning that it is the same landscape through which we had previously passed. Nor is it, in point of fact, the same: for the lights and shadows must have varied in the interval, and even the outlines of the objects we look upon are dissimilar, from being viewed from totally different stations.

Now, this curious, and always interesting, though often inexplicable circumstance, is far surpassed in most of its remarkable features, when, without moving from the spot, we survey such an extensive range as the top of Etna commands, first at sunset, and secondly at sunrise. It would answer little purpose to attempt to enumerate the singular differences which these two views present at the different periods alluded to; since I take it for granted—indeed, I know by experience in analogous cases, both in the Alps and Andes—that on no two days are the phenomena the same. I must again call attention to what has always struck me as being the most magnificent spectacle of the whole. I allude to the enormous shadow cast by the mountain itself, with more or less distinctness of outline, according to the altitude of the sun and to the distance at which its parts may lie from the spectator. When our radius of vision is a hundred and fifty miles, and the sun near the horizon, the end of the shadow must lie at that distance from us; and though, of course, its extreme outline cannot be traced, even with a telescope, its darkening effects are abundantly conspicuous over the whole intermediate area embraced by the contour of the shadow. In all those districts which lie adjacent to the mountain, however, its sides are not only visible, but so well defined that the minutest inequality in the ground, at that searching period of light and shade, may be distinctly made out, and many features of the landscape are thus detected, of the existence of which we can have no idea when the sun gets higher. For

these reasons, and others which need not be particularized, I say, by all means see both sunrise and sunset, from the top of the cone, if you wish to do justice to Etna.

CHAPTER VIII.

ON THE HEIGHT OF MOUNT ETNA, AS DETERMINED BY SIGNOR CACCIATORE, ASTRONOMER ROYAL OF PALERMO, SIR JOHN HERSCHEL, BART., AND CAPTAIN W. H. SMYTH, R. N.

BEFORE quitting the fascinating subject of Mount Etna, it is proper to say a few words as to its height, a subject which has given rise to some curious scientific discussions.

The inhabitants of Catania, like all persons who live in the neighbourhood of a high mountain, are so exceedingly proud of its height that they consider the maintenance of its elevation a sort of point of personal honour, and that any attempt to lessen its dimensions must be a reflection upon themselves. Up to a recent period, therefore, that is, to the close of the war in 1815, the Catanians, misled by the authority of Recupero, would have called any man out who should have expressed a doubt of Mount Etna being at least 13,000 feet above the level of the sea. Captain W. H. Smyth, R. N., well known to the world as the surveyor of the coasts of the Mediterranean, and by his book on Sicily and various other scientific works, writes to me that "Old Recupero gave for Etna's summit 2,500 toises, or nearly 16,000 feet, and for its circuit 183 miles! a larger space than poor Sicily could bear. These measures having been much doubted, his nephew took the field, and with great form measured a base on the plain of Catania (part of which I afterwards made use of), and with a large quadrant

obtained a result of nearly 13,000 feet, which, when I arrived, was esteemed a final determination. Hence the anger of the Catanians."

As Captain Smyth was not a man to take any thing for granted into which he had the means of inquiring, and as he was then professionally engaged in a survey of the Mediterranean, he thought it right to bring this matter to the test of trigonometry. The result was, that his measurements cut off nearly 2000 feet from the height. This retrenchment was of course resisted, and almost resented, by the Catanians, with as much energy as if a portion of their territory had been taken from them by the Congress of Vienna, then assembled to cut and carve the various states of Europe. Unfortunately for the Catanian side of the argument, it happened that Sir John Herschel some years afterwards determined the very same point by careful barometrical measurements; and to the renewed anger of the poor inhabitants, his determination came within a few feet of Captain Smyth's measurement, of which, it so happened, he had never heard. What was still more provoking to them, both these results agreed nearly with that of a totally different description of measurement made by their own countryman, the distinguished astronomer of Palermo, Signor Cacciatore.

Although these points are now currently received as true among geographers, I felt desirous of ascertaining the facts accurately, and therefore wrote both to Sir John Herschel and to Captain Smyth on the subject.

Sir John says in his answer, which is dated Hawkhurst, 2d Oct., 1840;—"The height of the higher of the two summits of Etna, which I measured barometrically in 1824, came out to be 10,872½ English feet above the level of the sea at Catania. Captain Smyth's result, with which I was not acquainted till long after the calculation of my own, gave 10,874. I have also, somewhere or other, though I cannot lay my hands on it, a memorandum of a zenith distance, observed by Cacciatore, of the summit of Etna, from Palermo; the result of which, calculated by a terrestrial refraction index, con-

cluded by Cacciatore and myself from observations by him and myself, on Monte Cuccio, gave a total altitude of Etna, agreeing, within a very few feet indeed, of the same: so that I have no doubt the above is very good, unless that summit have since been blown up or blown down. Yours very truly, J. F. W. HERSCHEL."

Since the above was written, I have received another communication from Sir John Herschel, inclosing me a copy of the letter above alluded to, from Signor Cacciatore, which, as it is a document of high interest in a geographical point of view, I shall give at length, both in the original and in a translation. The letter is dated at Palermo, 22d March, 1825, and is as follows:

"Mi ha recato questa sera medesima molto piacere il risultato che mi ha dato per l'altezza dell' Etna il coefficiente 0.076 da me stabilito a pag. 12 dell' opuscolo; il quale è pienamente conforme all' altezza determinata sulle osservazione vostre e del Sigr. Gemellaro. Di fatto la distanza del zenit della sommità dell' Etna osservata da quest' osservatorio in tempi diversi è $89^{\circ} 20' 25''$. La distanza in metri tra l'Etna all' osservatorio di Palermo dedotta delle positione geografiche che stanno nella 'Connaissance des Temps' del 1825, risulta nella supposizione dell' ellitticità $\frac{3}{17}$ di metri Francesi 150,673, e l'arco intercetto di $1^{\circ} 21' 8''$. Quindi la cima dell' Etna sul cerchio è di 3243 metri; il cerchio sul mare è $78^m 7$; onde la cima dell' Etna sul mare è di $3321^m 7$, che corrispondono a 10,898 piedi Inglesi, quasi quasi lo stesso che Voi avete didotto delle osservazione barometriche.

"La cosa in se sarebbe indifferente; ma mi sembra che possa dedursene:

"1^{ma}. Che quando si è stabilito il coefficiente della refrazione terrestre conveniente al clima di un paese, può esso servire con profitto a determinare con esattezza non ordinaria le altezze delle montagne a qualunque distanza coi soli angoli di elevazione.

"2^{da}. Che il coefficiente della refrazione terrestre non

depende tanto quanto si crede da molti dalle casualità inapprezzabile, ma altre abbia molta relazione colla latitudine del luogo, o sia colla media temperatura conveniente al clima relativamente alla sua distanza dall' Equatore."

(Translation.)

"I have been much gratified this evening by finding that the height of Etna which results from the coefficient 0,076, determined by me at page 12 of the opusculo,* is strictly conformable to the height determined from the observations made by you and Sigr. Gemellaro. The zenith distance of the summit of Etna measured at this observatory on various occasions, is $89^{\circ} 20' 25''$. The distance from Etna to the observatory at Palermo is 150,673 French metres, and the intercepted arc $1^{\circ} 21' 8''$. These elements are deduced from the geographical positions laid down in the 'Connaissance des Temps' for 1825, under the assumed ellipticity of $\frac{1}{318}$. Whence the elevation of Etna above the circle is 3,243 metres, and the circle being 78^m 7 above the sea, of course Etna is 3321^m 7, which corresponds to 10,898 English feet, almost identical with the result which your barometrical observations gave for the height.†

"This matter itself is not of any great consequence, but it appears to me that we may perhaps draw from it the following inferences:

"1st. That when we have established the terrestrial refraction due to the climate of a particular country, we may determine with extraordinary exactness the height

* The "Opusculo" referred to here was a little paper containing the results of some observations made by Sigr. Cacciatore and Sir John Herschel, on the summit of Monte Cuccio, near Palermo.

† This is only 25½ feet more than Sir John Herschel's determination, and 24 more than Captain Smyth's.—Vide pages 115 and 120.

The height alluded to as obtained by Sir J. Herschel on comparison of his barometrical observations on the summit with those of the Brothers Gemellaro at Nicolosi and Catania was 10,899 feet. Subsequent communications of corresponding observations made by Sigr. Cacciatore himself, extracted by him from the register of the observatory at Palermo, and much more to be depended on, induced Sir John to alter this determination to that finally adopted by him, viz. 10,872½ feet.

of mountains, *at whatever distance they may be situated*, solely by means of the angle of elevation.

"2dly. That the coefficient of the terrestrial refraction does not depend so much as many people suppose on inappreciable contingencies, but is more connected with the latitude of the place, i. e., with the mean temperature of the climate due to its distance from the equator."

Captain Smyth wrote to me from Cardiff on the 20th of October, as follows:—"I send you an extract from my book, on the height of Etna, the results of which had been previously given forth in print, and were seen in the Edinburgh Journal of Science, by Sir John Herschel, after his visit to Sicily."

"By means of several stations, bearing east and west, and north and south, the latitude of the highest point of the bifid peak, over the great crater, is $37^{\circ} 43' 31''$ north, and the longitude 15° east of Greenwich. The height, by a base line, measured on the plain of Catania, was 11,290 feet; that by barometrical measurement, nearly 12,000; and by a boiling-water apparatus compared with Dalton's table of the force of vapour, it appeared considerably more. But the first of these was uncertain in several of its corrections; the second can only be deemed an approximation; and the third an experiment. I, therefore, deduce the height according to a base line trigonometrically estimated, on the sea, during a calm, from stasimetric points previously ascertained on shore, and the subtended angles carefully corrected for error of instrument and refraction. This operation gives 10,874 feet for the height, 795,804 feet, or about 150 miles, for the radius of vision, and $1^{\circ} 43' 06''$ for the angle of inclination of the visible horizon with the true. This I consider as the best and most practicable method of obtaining its altitude, next to that of levelling, a process I could not spare time to perform.*

"The circumstance," continues Captain Smyth, in his letter to me, "of my making the experiment with boiling

* Extracted from Captain Smyth's "Sicily," page 145.

water was entirely accidental, and arose from my meeting with a Number of the 'Manchester Transactions,' in the military reading-room at Palermo. In this the method appeared to be so simple that I immediately had an apparatus made by Mr. Dreschler, a German mechanic who was invited into Sicily by my friend Piazzì. It consisted of a tripod with a lamp, and a vessel for the water, and a thermometer, the index of which was so fitted that it could be kept out of the steam. Some twenty years after this I met the worthy Mr. Dalton, and greatly amused him by recounting these particulars; as well as that, after the operation of measuring the mountain was concluded, we were afforded the means of making a very capital jorum of punch—no bad beverage in those elevated regions!

"At the palace of Prince Ruboldoni, a great friend of Lord William Bentinck's, whose naval aide-de-camp I then was rated, I first announced the conclusion I had arrived at respecting the height of Etna. A considerable sensation was produced thereby among the *savans* of Catania; for they were not satisfied that a mere young English seaman should in a few days diminish an altitude by two or three thousand feet, which had occupied Recupero many years to establish. And Cavaliere Giojeni, shrugging up his shoulders, and poising his outspread hands, as if comparing the weight of two cannonballs, exclaimed,—

"Ma Signori miei, vi pare che questo giovane, appena arrivato, possa sapere meglio di noi altri, l'altezza del Mongibello—meglio di noi, nati sulla lava, ed avvezzi sempre a studiare questo miracolo fra i monte della terra!"

"It would seem, gentlemen, from this account of the matter, as if this young man, but just arrived among us, could possibly know the height of Mount Etna better than we do ourselves—we who were born on its very lavas, and have devoted our whole lives to the study of this miracle among the mountains of the earth!"

"Having received a letter from Sir John Herschel," says Captain Smyth, "upon this subject, I showed it to our friend, the late Dr. Wollaston. After reading it

attentively, he remarked, 'that he had no doubt the Catanians would think there was now proof enough as to the real height of the mountain.' I replied, 'Perhaps they would; and that I was myself delighted with the results, though I could not but agree with Herschel that the very close agreements of our measures must be accidental.'

"That may be true," said Wollaston, 'as to the precise coincidence, but it is one of those accidents which would not befall two fools!'

"This was 'catching it with a round turn,' as we say at sea."

The following table of the heights of the different prominent stations in the ascent of Mount Etna, with which Captain Smyth has furnished me, must, I think, interest persons who have already made the expedition, while it may prove useful to those who may have future opportunities of climbing the mountain, either with or without instruments in their hands.

The following are Captain Smyth's trigonometrical determinations of the heights of the principal stations on Mount Etna, 1814:—

	Feet.
The summit	10,874
Foot of the cone	9,760
The English house	9,592
Philosopher's tower	9,467
Bishop's snow-stores	7,410
Highest part of the woody region	6,279
The Goat's tavern	5,362
Angelo the herdsman's cottage	4,205
Nicolosi convent	2,449
Lingua grossa	1,725
Cattabiano station	371
Catania station	47

The following are Sir John Herschel's barometrical determinations of some of the stations, in 1824 :

Nicolosi—floor of Gemellaro's house	2,232.8
Casa di Rinazzi	3,554.5
Grotta dei Capri	5,423.6
Lowest snow, to the S.E.	6,785.9
Mark, or pile of large stones	7,103.8
Casa Inglese	9,592.7
Highest point of the crater	10,872.5

The time may possibly come when, by one or more convulsions of the volcano, the levels of these stations, which have been thus accurately determined by totally independent methods, may be deranged. We shall then have the means, or, more probably, our posterity will have the means, of ascertaining the actual amount of the upheaving or subsidence of those parts of the mountain which the internal workings of the volcanic agents may have brought about. That such changes of level, both up and down, have actually taken place in times long past, there is abundant geological evidence to prove, in the completest manner of which such investigations are susceptible. It is, nevertheless, often very difficult to carry the imagination far enough back into the abysses of time to see how these things were actually brought about; but that in no respect lessens the force of the evidence by which the reason is convinced of the facts.

"In the mean time," as Captain Smyth remarks, in a letter to me on this subject, "such curious coincidences as those of Signor Cacciatore, Sir John Herschel, and myself, make me place Etna as one of the best ascertained heights of such an elevation in Europe."

CHAPTER IX.

PARTING FLING AT SANTA AGATHA—THE CHASER CHASED—A LONG-SHORE VOYAGE—THE SMOKE OF VESUVIUS ILLUSTRATES THE THEORY OF THE LAND AND SEA BREEZES.

AFTER dinner, though still excessively fatigued with our excursion to the top of Etna, we embarked in our little vessel; and as soon as the night fell, and the land-wind came off the shore, we put to sea. Rest was what we wanted, and if Catania had not been the noisiest town in the world we should have remained there in preference to going to sea to look for repose. But in that

city, especially at Signor Abbate's, sleep is an article which even his talents as a landlord cannot command. In other respects it is an excellent hotel, and would be perfect were it not for a certain church nearly opposite to the door, dedicated, as I have already mentioned, to Santa Agatha—whom perdition seize!—the patron saintess of Catania. In right of this distinction, I suppose, the bells of this well-anathematized church scarcely ever cease ringing. There is not a trace of melody in their sound; no mixture of deep tones and sharp tones; no attempt, even, at a tune, however barbarous, nor of any kind of measure, but merely one loud, rattling peal after another, jarring on the ear, and cutting into the centre of one's head. How the inhabitants submit to this grievous annoyance is astonishing, for every mortal within half a mile round must be continually disturbed by this senseless, childish, irritating noise; yet such is the force of habit, the hard-headed Catanians seem rather to like it. To me it became so great a nuisance that no consideration should induce me to live in that place. I remember hearing a gentleman say that he was so tormented with the bells of Rome that he quitted it on that account alone.

Deep but troubled were our slumbers that night, in the offing; for our exertions had been pushed so much too far, that the feverishness which succeeded our journey counteracted the effects of sleep. We therefore looked forward to the following night for lighter and more refreshing repose. The next day promised fair, but before noon a fresh breeze sprung up, accompanied by so high a sea, that every one of our party, excepting only the infant and myself, were laid prostrate; even I felt so squeamish that I had enough to do, tired as I was, to enact the nursery-maid. Female aid there was none, but by the steward's assistance I got through the weary day; and right happy I was when the turbulent sea-breeze fell into a calm towards sunset. By this time we had stretched over to the coast of Calabria, from whence Mount Etna, with a blood-red sunset behind him, and a tower of gilded clouds above his head, looked like the

monarch of the Mediterranean sea. Unfortunately the rest of the company were many degrees beyond the point of caring for the picturesque, and I had the beauty of the scene, as well as a huge dinner, all to myself.

I must say, however, for the Italian sailors, that they have a stronger sense of the beauty of nature than our worthy Jacks have; at least I remarked, on this occasion, that the fellows hung over the rough tree-rail, with arms crossed, and red caps drawn over their eyebrows, enjoying the sight of their splendid Mongibello with an instinctive sort of admiration, cultivated from infancy, when passing to and from some of the most magnificent spots on earth—Naples, Palermo, and Catania.

It is said by navigators experienced in those seas that, owing to the size and configuration of Sicily, on the one hand, and of the southwest angle of Italy—the toe of the boot—on the other, the wind blows always either directly up or directly down the Straits of Messina. I cannot say that I fully understand the theory of this matter, but certain it was that we had the wind directly down the channel,—that is, from the north, or right in our teeth. For my part, I was well pleased to have it so, for the water had now become so perfectly smooth, and the wind moderate, that as we beat our way through the straits, tack after tack, or as we say, hank for hank, we had the most favourable opportunities possible for seeing the coast of Calabria, close to which our captain very judiciously kept his little vessel all day. This was done partly, as he explained to me, to enjoy the benefit of smooth water, and partly to profit by the drain of an eddy-current which runs along shore at certain seasons of the moon, under circumstances much too complicated for the comprehension of any one who has not studied the subject on the spot.

Towards evening we stretched across from Reggio to Messina, of which pretty city we had a fine moonlight view. We passed so near to the shore that we could hear the voices of the boys bawling in the streets, the dogs baying the moon, and lastly, at nine o'clock, the drums of the garrison setting the watch. By this time it had

fallen quite calm, with a heavy dew settling on every thing. Overhead hung so clear and starlight a sky that we lingered on deck till late enjoying the mysterious kind of view which a great town seen by moonlight always presents, especially if it be built on steep ground, with high mountains behind it, all cut, as those of Sicily are, into deep glens, with intervening ridges richly clad with cultivation, and spangled with country houses, the pleasure seats of the more wealthy citizens. As we leaned over the vessel's quarter, admiring the beautiful prospect, we caught the first breath of the land wind which was beginning to waft us gently along. The sails scarcely bulged out, the rich perfume of the orange flower came drifting off to us, and we thought every soul in Messina must be asleep, and that we alone were awake to enjoy the night. Suddenly a loud crash from the bells of all the churches altered the whole character of the scene, and gave life to what but the instant before had seemed buried in the deepest repose. Nothing is so discordant as a number of church bells when rung close to the ear; but if they lie a mile or two off, are very numerous, and of different depths of tone, and are heard by moonlight, over the water, the case is quite different.

During the morning of this day we had a sort of adventure. When busily employed in beating through the Straits of Messina, we observed a vessel, like a man-of-war, standing down upon us before the wind, with studding-sails set. She passed us within half musket-shot, but showed no flag, nor took any notice of us till she had gone a mile or two to leeward, when she rounded to, hoisted French colours, and fired a shotted gun at us. As the ball did not nearly reach us, all that our gallant captain did was to hoist his Neapolitan ensign, and steer on his own course. Presently, the corvette, for such she evidently was, fired another, and another shot, "with more advised aim;" and as these fell a little nearer, Don Giovanni came down to consult me as to what was best to be done. My professional habits led me to recommend obedience to the mandate of a ship of war, so unequivocally expressed.

"You had better," said I, "put your helm up, and run down to him, to see what he wants with you; though I confess I do not very much like this summons made under the tri-colour—a flag it has often been my fortune to chase, never before to be chased by." So I modified my first recommendation by telling the captain he must judge for himself—although, upon the whole, I thought there could be no great harm in running down to a man-of-war in time of profound peace.

"But it is not profound peace!" exclaimed the embarrassed skipper.

"No?" said I. "What nations are at war?"

"Oh," cried he, "are you not aware that hostilities have been declared between my country, Naples, and Tunis? We do it once a year or so, in consequence of some ill-understood arrangement between the countries—by which matters cannot be adjusted without a declaration of this sort, periodically."

"That is very odd," I remarked; "but what has that to do with France?"

"Yes! yes!" observed the cautious belligerent: "yet who knows but this corvette, though she wears French colours, may be a Tunisian in disguise? and, in that case," continued the agitated old boy, "if we feel ourselves in his power, we may all be sent to Morocco, or the Lord knows where!"

"Oh, for any sake," I cried, laughing, "if there be the least chance of such a fate as that, let us carry on in good earnest, and don't bear up till his shot begin to fly over you."

"I think so too!" cried the old gentleman, who jumped on deck again, just as another shot was fired, and which falling much nearer than the previous ones had done, gave us to understand that, unless we looked very sharp, we should soon be taught to respect the pendant.

During the previous six weeks I had been on board the brigantine, I had abstained from interfering with the discipline of the ship or the trim of the sails, not judging it of any importance whether we moved a knot faster or slower per hour—our object being to sail about for

pleasure. But now it was another affair entirely; so as soon as Don Giovanni had taken the tiller, and having obtained his permission, I set about trimming his sails, according to the manner of an English ship-of-war. This operation greatly edified the Neapolitan crew—who, I dare swear, had never in all their lives before seen the topsail sheets close home, the yards at the mast-head, and properly braced up, or the bowlines duly hauled forward. I did not, of course, attempt to work the ship, for I was ignorant of their technicalities, but I took care that every sail was doing its duty, while the worthy captain, fixed at the helm, smiled with a very ambiguous kind of mirth as the Frenchman's shot fell at first nearer and nearer to his vessel. Whenever the Frenchman tacked, we tacked too, and, as our little craft could go nearer the shore than the corvette dared to venture, we had the advantage of the eddy tide. Our skipper's experience of the straits, combined with the good sailing of his vessel, and partly the unwonted smartness of the crew in working the sails, enabled us to draw away gradually from the corvette.

Meanwhile, there was produced in the cabin below no small commotion amongst the female part of our freight. The sea-sickest of the party became all at once quite well, and the most adventurous very cool and unenterprising. The whizzing of the Frenchman's shot, and the tall, perpendicular splash which they made in the water, seemed to the eyes of those who ventured on deck, any thing but picturesque, however sublime they may have looked. Nor did the children, I thought, half relish my jokes about Salee rovers, Turkish harems, sowing up in sacks, and so forth—interesting things in Byron's poetry, but rather disagreeable as realities!

What might have been the consequence if the corvette had gained upon us, instead of our leaving her astern, I do not know; but it soon became apparent by the increased distance at which his shot fell from us, that we had the heels of him; and at last, to the great joy of all on board the Palermo, our friend hauled down his colours, bore round up, and made all sail towards the

Levant. What or who he was?—what he wanted?—where he came from, or whither he was going?—we never learned, and never, probably, shall know; unless the French Minister of Marine should make a national question of the matter, and institute an inquiry to find out, by the logs of the French navy, what sloop of war of that nation passed through the Straits of Messina on the 19th of June, 1834.

When the next morning broke we found ourselves still within the straits, having gained only eight or ten miles in the course of the night—so that it was not till breakfast-time that we passed the celebrated Faro Tower. But the wind being extremely light, we had scarcely sailed a league beyond the entrance before we encountered a succession of those very currents and whirlpools so much spoken of by the ancients. In a moment we were whirled round, and before we could well look about us, were forced back, stern foremost, between Scylla and Charybdis, into the straits again. On every hand we could distinguish these vortices, causing loud-sounding ripples, quite sufficient, by the help of a little dose of poetical fancy, accompanied by darkness and rain, to have alarmed such primitive seamen as the poets describe.

Just as we were backing into the channel, crab-fashion, though our sails were all full, and we had steerage way, the breeze freshened a little, so that we stemmed the tide, and drew slowly to sea, out of the neck of the funnel. Had we been impatient to get on, instead of being anxious to be detained in that enchanting region, the light baffling wind which scarcely moved us through the water all day, would have been very teasing. As it was, we rather enjoyed the nautilus sort of pace with which we moved along. The good old captain whistled in vain for a wind, while we luxuriated under our awning, reading and working and enjoying the changes which the sun's rays wrought amongst the mountains, as he first rose to the meridian, and then fell among the western seas and islands. When night closed in upon us we lay becalmed, about ten miles from the Light-

house, or Pharos, so celebrated in all ages of the world's history.

Our distance made good in three days was seventy miles, or hardly above one mile an hour, a rate of going which promised to get us to Naples in a week! Fine sailing, truly! considering that the distance was not more than 180 miles. We were so happy on board, however, that though we wished to get into port, we felt no impatience, and as we kept the land in sight all the way, the voyage never became dull or tiresome. On quitting the Straits of Messina we fell among the Lipari Islands, which we kept in sight for several days. Of these, old Stromboli is certainly the most interesting, from its vomiting forth flames and red-hot stones every four or five minutes, an operation it has continued to perform, without intermission, ever since the earliest times of history. After nine days of sailing, we approached Naples, and then we did begin to feel a little tired; for although Don Giovanni was the best of captains, the Palermo the best of brigs, and Signor Monso the best of cooks, we found that it was possible to become weary even of these blessings, when a passage which might very easily have been made in less than three days was spun out to nine. Besides which a novel and magnificent set of objects, however, which now came in view, once more roused us all into action, and made us ten times more anxious to reach the anchorage.

On sailing across the Bay of Salerno we got sight of the top of Vesuvius, and discovered that the volcano was in full eruption. A vast column of black smoke rose from the summit of the mountain, in the midst of which, every ten or twenty seconds, immense jets of red-hot stones were projected high into the air. A permanent glow of pinkish red light, reflected from the vapours of the upper sky, showed that the mouth of the great furnace or caldron of molten rock was open. We also saw a long line of light on the northwestern side of the cone, which implied that a stream of lava had burst forth and was pursuing its course in that di-

rection. Our distance from the scene of volcanic action could not be less than twenty miles, and yet the effect of each explosion was one of the grandest things I ever beheld.

It may not be uninteresting to those who have studied the history of the winds, and especially that branch of it which is so useful to navigators to understand thoroughly, to mention some curious facts which I had it in my power to observe upon the occasion alluded to, none of them strictly new, but so remarkably in accordance with the received theory of the land and sea-breezes, as to deserve particular attention. I am the more disposed to record these facts, partly because I have lately met with some new speculations on this subject, which I consider quite erroneous; and partly because it very seldom happens that so good an opportunity occurs of watching the whole course of this aerial phenomenon, during a succession of days. It is true of meteorology as of other sciences, that we must often content ourselves with insulated facts, and endeavour to link them together, so as to render them available in practice, by bold and well-regulated generalizations. Still, however well-founded those reasonings may be, we should gladly avail ourselves of such opportunities as that which I am about to mention, whenever even the simplest and most undisputed of our theories meets with actual illustration in all its parts.

I had been led to suspect for several days before we came near Naples, that an eruption of Vesuvius was going on, and said so to the captain, whose attention I in vain called to the symptoms which I thought decisive. I was led to form this conclusion from observing a dense vertical column of smoke behind the hills adjacent to Salerno, connecting itself at top with a long horizontal line of cloud stretching far out to sea—in a direction opposite to that of the wind, which had been blowing along the surface, pretty steadily, all the day, towards the land. In the evening this cloud of smoke, which I conjectured was supplied by the volcano, took an opposite course, and stretched its long tail for many a league

landward. Next morning it changed its course, and extended itself, as before, straight out to sea, in a direction contrary to the wind; and again in the evening it turned in shore, so as to stream along the sky towards the inland mountains.

These observations show clearly that there is an upper current, seaward, during the day, and landward, during the night—exactly as we should have anticipated by theory. For as soon as the sun sets, the land begins to cool by its heat radiating to the sky, which does not return the heat, if there be no clouds to intercept and reflect it back again to the earth. As this cooling process goes on much more rapidly on the land than on the water, the air over the shore presently becomes cooler, and consequently heavier, than that immediately over the sea. The result necessarily is that the denser air settles down and flows from the land, displacing the less dense or lighter air over the water, which is thus forced into a higher region, along which it flows towards the land to supply the place of the air, which had previously been cooled and gone off to sea. Thus a circle is formed which continues during the night, or as long as the cooling process of radiation goes on. Hence the land wind. During the daytime a similar circular motion takes place, but in an opposite sense—for the land becomes much sooner and more heated by the action of the sun's rays than the sea does, and consequently the air over the land becomes more heated and rarefied than that over the sea. This causes it to ascend, while its place is supplied by a drain of comparatively cool air from the sea—the first part of which rush will take place close to the beach, the next further out, and so on, till the air in the offing is called upon to supply the demand made on shore. Thus the sea-breeze is produced—almost always first in-shore, and lastly, far out.

The phenomena described above are well known to coasters, who by availing themselves unconsciously of these beautiful laws, gain great advantages over larger vessels, whose draught of water is such as to render it often unsafe to approach the coast within those limits

where the sea and land breezes first make themselves felt. I have, indeed, not unfrequently been mortified to find how little I could profit by these winds in a ship of war, while the sloops and schooners of the country shot along the shore, under a press of canvass, and were out of sight, before we were released from the calm bordering these breezes which, as it were, fringed the beach, and for some time the beach only.

There is nothing new either in the observation of these facts, or in the theory by which they are explained; but I have thought it a good opportunity to advert to both when they happened to be observed together, which is very seldom the case. At least, I can say that, although I have navigated for many thousands of leagues, in those regions of the globe where these periodical winds prevail, I could never before lay my hands upon perfectly indisputable, that is, visible evidence of the working of the laws by which they are regulated. It is true, I have seen, as every one must have done, abundant detached proofs of the truth of the theory of the land and sea breezes of hot climates; but until I watched, for a succession of days and nights, the smoke of Vesuvius in eruption, high in the air, and at the same time paid close attention to what was going on, low down, upon the surface of the sea, from the margin of the shore to the horizon, six or eight miles off, I cannot say that I ever witnessed a complete series of these opposite circuits.

Though they act on a scale comparatively small, the land and sea breezes are eminently useful in navigation, and may often prove of the utmost service in war. It is on this account, chiefly, that I should wish to engage the attention of officers, not only to the general laws which regulate these currents of air, but especially to those local circumstances which interfere with their regularity, and so materially influence their direction and force, that the most unlooked-for results often occur to distract the mere rule-of-thumb navigator. On a commonplace, or jog-trot pleasure voyage, such as ours round Sicily and along the coast of Calabria, it matters but little where the ship is placed at sunset before the land wind comes

off, or at sunrise before the sea-breeze sets in. But if the ship were on real service, and the coast that of an enemy, the correctness of an officer's position at the periods alluded to might determine whether his expedition should succeed or fail—whether he should capture his antagonist, or have the mortification of seeing him escape. But it will not answer on such occasions to say “Oh, we shall have the land wind at night—the sea-breeze by day,” since, unless it be correctly known whereabouts these winds will respectively take their rise, and the ship be previously placed in a situation to profit by them when they set in, not only is nothing gained, but it will happen as it often has happened to me—that instead of being a source of profit, these breezes, by reason of inexperienced management, will only retard the voyage.

Now, as an officer in command of a ship of war may be called upon, at a moment's notice, to act on a coast, (that of Italy or Syria we shall suppose,) of which he has had no experience, I should say that unless he watched for such opportunities of local instruction as I have been describing, he might find himself baulked in his operations, and outwitted by the local authorities, in a manner which, had he known how to watch for and apply to practice the phenomena in operation before him, would not have been possible. A seaman ought, therefore, never to forget that, although one set of general laws undoubtedly regulate all the winds, still these are always so modified by local circumstances that, even when the cases seem identical, the most important varieties occur, which may greatly retard his voyage, if not watched for and studied, but which will materially advance it if they be duly understood.

CHAPTER X.

MOUNT VESUVIUS IN ERUPTION.

ON reaching Naples, and re-anchoring in the Mole after seven weeks' absence, we learned that the eruption of Vesuvius had been going on for a fortnight, but that the finest exhibition of all had been on the night when we saw it from the bay of Salerno. This was not very consolatory, especially as the Neapolitans assured us the commotion was at an end for the present, a piece of information I did not altogether believe, as the smoke and flames, or what appeared to be flames, continued to issue almost constantly from the crater; and as we made sure of seeing, if not a regular eruption of lava, at least a succession of explosions of red-hot stones, which is one of the grandest fireworks in the world, the famous Girandola, on the castle of St. Angelo at Rome, not excepted—we resolved to make an expedition, and take our chance the next day, whether the volcano was in action or not.

Accordingly, at four o'clock next afternoon, we left Naples, and drove straight to the house of Salvatore at Resina, and were so fortunate as to find this prince of guides not only disengaged, but so much in expectation of company, that his beasts were all ready saddled; and in less than a quarter of an hour we were off, under his skilful and agreeable guidance. For Salvatore is—or at all events was, and I hope still is—one of the best informed persons at Naples, independently of being the most cheerful and adroit and considerate of guides. Some of us were mounted on horses, some on mules, some on donkeys, and after a charming ride of an hour and a half, we reached the celebrated hermitage—the inmate of which as little deserves the venerable title he bears, as did the friar of Copmanhurst in *Ivanhoe*. Among other incongruities of his position, this jolly personage was surrounded by a guard of soldiers, or persons dressed

in uniform, one of whom accompanies every party. This troublesome appendage, we were told, was tacked on ever since a notorious robbery had been committed some years before—but our Sicilian experience led us to suspect that it was a mere subterfuge for getting more money; so as it seemed vastly pleasanter to be without a guard than with one, we gave him his fee on the express condition of his leaving the work undone. The fellow smiled at an obligation so agreeable to himself, and pocketing the carlin, turned us over to the robbers without any compunction.

The trip up to the base of the cone looked quite a child's play, compared to the arduous task of Mount Etna—for the path was everywhere chalked out, in most parts quite good, and the fatigue nothing at all. But the walk, or rather scramble up the cone, proved more difficult in comparison than that of Etna in the inverse proportion of the heights of the two volcanoes. This, so far as I have studied mountains of the sort, always takes place. Thus Etna, which is more than twice as high as Vesuvius, has not half so large a cone of ashes at the top—and Teneriffe, which is some thousands of feet higher than Etna, has a much smaller cone. It would seem that the expansive forces within the volcano, having a greater perpendicular height to work through, either do not eject the ashes and scoria so far, or in so great a quantity, and consequently the conical hill at the top is small in proportion to the general elevation of the mountain. Salvatore, by help of a leather strap, aided one of the ladies, and his assistant guides, having received his orders, took the others in tow. Up we went in good spirits—but still it cost us an hour and a quarter's hard work, for nearly one half of each step was lost, owing to the softness of the footing. I forgot to mention that my little girl being carried on the shoulders of two men, in an arm-chair, she was saved all fatigue.

As we approached the scene of action, the night became more dark, the jets of red-hot stones more and more splendid—and just before we reached the crest of the ridge, a scout, whom Salvatore had sent forward to inspect the state of the mountain, shouted out that he saw

symptoms of eruption. Accordingly, by the time we gained the summit of the wall which forms the outwork of the great external cone of all, we beheld, to our infinite joy, the lava flowing from an orifice to a considerable distance. Near the opening it was of a bright white heat, with only a slight tinge of pink. As the stream receded from the source, the pink colour gradually increased, and at some places, its surface was slightly dimmed by patches of a dark, crusty-looking matter; but as these too were red-hot, it was merely a less brilliant degree of redness, which made them distinguishable on the surface of the melted lava.

The distance of the stream was about a mile from us, yet the light which it shed all over the dreary intervening surface of the rugged top of the mountain was sufficient, I hoped, to enable us to reach it in safety. But Salvatore declared such an enterprise almost impossible, and certainly very hazardous. As I recollected having very nearly lost my life on the same spot, when under the same pilotage, I deferred to his authority at once, and limited the expedition to a good view of the magnificent jets of stones, which had now become almost incessant. I counted the time which some of these red-hot balls took to fall to the ground from the highest point of their ascent. The longest which I remarked was twelve seconds, from which I infer that the height to which the stone was projected must have been about 2,300 feet. Sir William Hamilton, it will be recollected, considers that the column of liquid lava which shot up in his eruption mounted 10,000 feet. And I remember seeing, at Teneriffe, immense spherical masses of lava, as big as a post-chaise, which must have been shot out of the crater to the distance of several miles; so that what we saw at Vesuvius on this occasion was no great things. The guides assured us that on the Saturday before the stones had been thrown to twice the height—but I have no better evidence of this fact than their assertion; and as guides, like other people who are averse to being outdone, find it quite easy to stick on a handful of seconds to the time of the descent of a stone, I took the liberty of doubting their fact.

Next day I made another expedition to Vesuvius alone. Setting the heat of the sun as well as that of the volcano at defiance, I resolved to have good daylight for the work, and therefore started at four in the morning. This enabled me to manage the ascent in cool weather, and as I took up a tea-kettle and other requisites for breakfast, and found a snug nook, under a projecting point of the lava of the great eruption of 1822, I made a most satisfactory meal. When starting from Resina I suggested to Salvatore that we might as well carry some charcoal with us to make a fire for boiling the water; and though he is the best-bred person imaginable, from having kept company with the choicest spirits of Europe, he could not help smiling for a moment at my ignorance of volcanic habits.

"No! no! sir," cried he, "there is no want of fire among those lava streams which have been running lately. We have only to look about for a crevice in some of the eruptions of last week, and your kettle will be set a-boiling in a moment."

In effect I found that, in the very lava current, the surface of which was so cool that we made it our breakfast-table, without even our pat of butter being melted, we found not merely heat enough in a chink to boil water, but by removing a loose stone or two, could gain a peep of the red-hot rock, still glowing in the interior. Let people think of this who in consequence of the coolness of the exterior crust of the globe distrust the assertions of the geologists about the probable existence of internal fires. It may also be useful to recollect that we can place our hand without discomfort on the outside of a burning fiery furnace, of only a single brick in thickness. The actual presence of such facts on the great scale, on the summit of a volcano in eruption, immediately sets the mind thinking and speculating; whereas when we meet with the same things in the ordinary kitchen-garden walk of life, they fail to make any profitable impression. This is fortunate enough, for if small matters were to be always making us reflect in the same way that great ones do, we should have no time left for any thing but speculation!

After breakfast we set out to make the complete circuit of the outer cone, within which lay the great volcanic vent, then in very fierce commotion. We had thus an opportunity of seeing the performance from every point of the compass, and though it was magnificent in all, the most interesting process by far was the actual stream of liquid lava, the very commencement of which we had witnessed the night before. On that occasion, as it was dark, we could not approach the orifice, but were obliged to content ourselves with a distant view. We now went close to the spot whence the lava issued from the mountain's side, in the manner of a gigantic spring, apparently coming from below, and bubbling as it made its way out, began to flow down a pretty steep surface, like a river of fire, as indeed it was. I took notice that from the first moment of its leaving the opening in the ground, the surface began to excoriate, that is, to acquire a skin or crust, which as the stream advanced became thicker and blacker, till, at the extremity of the current, it formed a hard, rough hide, not unlike that of a rhinoceros, only less regular, for it was broken into innumerable angular pieces of all shapes and sizes, which, as the mass of lava rolled forward, were tumbled, with a loud crackling noise, confusedly one over another.

I measured the velocity of the stream near the opening, and found it to advance about one foot in two seconds—which is about the third of a mile in an hour. Then it was quite liquid, and very like the melted iron or copper of a foundry. We thrust our staves into it with great ease, and even forked out lumps, on which we placed coins, and having thrust these into the soft mass with the end of a stick, they remained imbedded in the lava when it cooled. At the extreme end of the current, where the ground was less steep, the motion became very slow, being about a yard in six minutes, or ten yards in an hour, which is 240 yards in a day. Calculating at this rate of advance, I imagined it might take a day and a half, or a couple of days, before the stream of lava reached the edge of the great cone and poured itself over, so as to become visible at Naples. But in

the interval a fresh accession of matter had taken place, either from more melted lava having been discharged from the orifice, or from the junction of a new stream, for in less than one day we had the satisfaction of witnessing a splendid fiery cascade more than a hundred yards in width, tumbling over the crest of the mountain.

In the circuit which Salvatore and I made of the top of the volcano, we had an opportunity of witnessing the various effects of the eruption then going on. The ground was almost constantly in a state of tremor, deep-seated roarings were heard from time to time, enormous jets of red-hot stones projected far into the air every four or five minutes, vast masses of dense smoke issued from the crater, and finally, as I have mentioned, the mountain in its terrific throes gave birth to a river of lava.

To see all these things to any good purpose, it was necessary to go pretty close—much closer than I at all liked, or than I should have ventured under any other guidance than that of old Salvatore, who accompanied Sir William Hamilton on his visit to Vesuvius during the celebrated eruption of 1784, exactly fifty years before! The wind, according to his account, appeared to exert a much greater influence on the jets of stones than I should have imagined possible. At one time we came to a district over which the shower had been scattered a quarter of an hour before we passed—as the guide had pointed out from an intermediate ridge which we had to cross. I rather objected therefore to a route which was to take us across a spot so recently within the range of these red-hot volcanic shot.

“Oh never fear,” said the veteran, glancing his eye towards the adjacent huge chimney, then belching forth flames, smoke, and stones, with more than usual violence; “don’t you see the wind has shifted, and is now blowing towards the crater?”

For all this, I could observe the old gentleman’s eye fixed rather anxiously to leeward; and several times he attempted new paths, leading us further off, but there appeared no other feasible way, and so we took our chance. Neither did I altogether relish the taste with which he entertained me with stories of the risks he had

run, and of the accidents which had happened to persons who had accompanied him on former occasions. It is true, he always made it appear that the only danger arose from neglecting his advice, and that if I would but attend to what he said we should get safe round the hill. This was all very well, but once or twice, when the stones were whizzing about not far from us, the possibility of the guide himself being knocked down crossed my imagination—and then what a scrape I should have been in with only a little regazzo, as ignorant of this critical navigation as myself!

“A few years ago,” commenced Salvatore, just after a pretty heavy shower of stones had fallen not very far within us, that is, between the cone and us, “I came up the mountain with a party of gentlemen, one of whom insisted upon going not only round the cone, as we are now doing, but actually into the crater, although I told him that such an adventure was fraught with much more danger than the thing was worth.

“‘Pooh! pooh! danger!’ exclaimed this pig-headed gentleman, ‘what care I for danger—am I not a soldier? Why, man, I have faced the foe before now! Lead the way, I’ll follow!’

“I merely remarked,” continued Salvatore—who is himself as brave as steel—“that to face a human enemy, and to face an active volcano, were two very different things.

“‘Are you afraid to go?’ asked the gentleman. ‘I don’t much admire it,’ said I, ‘but as I think I know how to evade the danger when it comes—having been at the work for nearly half a century—I’ll go into the crater if you are determined upon the adventure. Only, I again warn you, that there is great danger to an inexperienced stranger.’

“‘Well! well! Come along,’ cried the impatient soldier; and away he went—the young man flourishing his stick like a sword, while I, the old man, only shrugged my shoulders.

“‘Now, sir,’ said I to the gentleman, ‘the only plan by which we can hope to accomplish this expedition in safety, is to be perfectly steady, and to stand as cool and

collected as if nothing were happening, should a shower of stones come about our ears. I hope we may have none while we are in this awkward place; but should we be so unfortunate, mind, your only chance is to stand fast and look upwards. It requires good nerves—so brace them sharp up.’

“‘Oh! nerves! is that all? You shall see!’ So away we went,” said Salvatore, “climbed the lip of the cup, descended the fearful abyss, and though half choked with the fumes, saw all we wished to see, and were actually on our return, when the mountain roared like thunder, the ground shook, a furious eruption took place, and myriads of stones were shot a thousand feet into the air.

“‘Now, Signor mio,’ I called out, ‘stand your ground, and make good use of those nerves you spoke of. Look up—be steady—and you may yet escape.’

“But the facer of mortal foes quailed before those of nature: he looked up as he was bid; but when he beheld a cataract of fire falling on his head, the courage he had boasted of on the plain forsook him on the hill, and incontinently he fled. For my part,” continued the energetic old man, “I was too much afraid to fly. I never saw such a shower of stones, and only wonder how we were not both demolished. As it was, my companion had not run far before he was struck down by three stones, one of which broke his leg, the others stunned him, and I had enough to do to carry him on my shoulders out of the cone. Much work we had to get him to Naples, where the hotel-keepers and the Italian doctors between them had the plucking of this precious pigeon for the next six months.”

This story brought us to a very wild and strange-looking region of the mountain, where all trace of path was lost, and where apparently there was no gorge through which we could find our way. It would seem that some cracking of the strata, or stream of lava, during the eruptions of the last ten or twelve days, had entirely changed the character of the ground, and effaced all the old landmarks by which the guide had formerly been directed. The suffocating smell of sulphur, and a

painful degree of heat in the rocks under foot, inclined Salvatore to apprehend that we were close upon the spot where lava had either recently broken out, or was shortly to break out, and which way to take he really felt at a loss. This was a pleasant prospect truly, with a declining sun, and the mountain manifestly getting more and more angry every minute! I never felt less in love with scientific research in my life, or more disposed to obey, with the utmost docility, the orders of any leader.

"I see a road," said the guide, "but it is a dangerous one: for the rocks, as you may hear, are detaching themselves at every instant from the edges of the precipices."

As he spoke these words, a huge mass of ancient lava broke away from the cliff above us, and fell thundering into the midst of the party. Salvatore, who was before me, leaped forward, and I, following instinctively, sprung haphazard among the rugged strata, to avoid the fate which would have attended a moment's delay. The lad who was behind us, whose terror I dare say was not greater than ours, but whose presence of mind was less, cast from him my camera lucida and a little basket he was carrying on his head, and leaped right downwards into a crevice in the rock, and thus escaped as by a miracle being crushed like an egg-shell. We thought he was gone—and, indeed, had he performed the same feat a very little further on, he might have escaped the falling rock, from its being larger than the crack was wide, but he must have been roasted alive by the red-hot pit! As it was, we had enough to do to extricate him from his prison; and having packed up the basket and the instrument, made the best of our way out of such a perilous neighbourhood.

A little further on we completed our long circuit of the cone, and came again to the fountain-head, or orifice of the stream of lava, which I have already spoken of, near to which Salvatore pointed out a small extinct crater, into which a few years before he told us a French gentleman had flung himself headlong! It appears that he announced his intention to his friends,

several of whom accompanied him to the spot, scarcely believing, we may suppose, that any one would carry such a threat into execution; but all the party, it is said, shed the proper allowance of tears on losing sight of their companion in the abyss.

Salvatore, who was rather excited by our own recent adventure, asked me which I thought the greater fool of the two worthies—the Frenchman, who jumped into the crater, with a certainty of death; or the Englishman, who insisted upon examining the dangerous spot, in the teeth of his guide's advice? I replied at once that I thought my countryman the least excusable, inasmuch as his folly included in the risk, not only his own life, but that of the incomparable "Capo Cicerone of Vesuvius;" whereas the Frenchman only removed himself out of the world—a person who, doubtless, could be well spared!

There was still daylight left for us to see from the mountain's side, on our return, the towns of Portici and Resina, which may almost be called an extension, or suburb of Naples—forming a long belt or tail to that huge city, and winding round the edge of the glorious bay. Like most Italian towns, the beauty of these places vanishes as you approach them. At four or five miles off, you are in raptures with their charms. At two the details begin to delight you, for then, the gardens and vineyards make a show. At a mile or less you distinguish the merry, sunny groups of gaily dressed people, moving about among new porticoes and old arches, in the midst of fruits and flowers, and all the rich foliage of that naturally-heated neighbourhood. Soon after this, you hear the loud noises of the squabbling inhabitants, as you encounter the din and dust of the suburbs, with their multifarious smells—and at last, when fairly entered, all traces of the beauty you once admired is gone.

As it may not be amiss to mention what the expenses of such expeditions to Vesuvius are, I shall give Salvatore's Bill, in the original, partly to show how pretty the Italian language is, even when treating of the least elegant things in the world—donkeys, ragged boys, and boot-heels,—and partly for the information of others:

NOTA DI SPESE DEL VIAGGIO DEL VESUVIO.

	Ducats.	Carlines.
Per il Cavallo - - - - -	1	20
Per due Uomini - - - - -	1	20
Per il Ragazzo - - - - -	0	20
Per Buonamano (gratuity) - - - - -	0	40
Per la Carozza (carriage back) - - - - -	0	80
Per accomodo di Stivali (mending boots) - - - - -	0	30
Per la giornata del Capo Cicerone, che ha fatto il giro della Montagna - - - - -	3	00
	<hr/> 7	<hr/> 10

Equal to £1 3 8

Ho ricevuto la Sp^a d^{ta} Somma,

Il Capo Cicerone,

SALVATORE MADONNA.

CHAPTER XI.

ISCHIA—ASCENT OF EPOMEIO—FATIGUING MUSEUMS OF NAPLES
AND PORTICI—GRAND ERUPTION OF VESUVIUS.

THE contorni of Naples are so fertile in objects of interest, and of such variety, that no difficulty is found in changing the scene, when health, or curiosity, or caprice, suggest a move. In our case, we felt so excited, and as it were burned up, by the volcano of Vesuvius, that we gladly accepted the proposal of some friends to accompany them on a little expedition to the island of Ischia, which lies on the outer or seaward side of the Bay of Naples, and greatly adds, by its lofty peak, and in company with its neighbour Procida, and the more remote island of Capri, to the beauty of that splendid scene.

We started so early in the morning as to carry a brisk land wind with us; and though the bay is generally as smooth as a mill-pond, we found it pretty rough. I may just hint in passing, to persons who make water excursions, especially in those climates where the winds are periodical, that their success will depend almost entirely on the previous arrangement of hours with the boatmen. It will not do at all, for instance, to say that you will run

across to Ischia after breakfast, or, if you are there, to say you will return to Naples early in the morning. By so doing you will probably have the wind in your teeth both ways. All this may seem abundantly obvious,—but it is wonderful how often such expeditions are bungled at Naples and elsewhere by the want of attention to this simple and obvious precaution. We had a stout boat with six rowers in case of a calm, but the breeze took us right into the little cove of Casamicciola, on the north side of the island, without a single shift of the sail. The face of the country above the beach looked so inviting, with the most engaging country inn, called the Sentinella, on a knoll rising above it, that we resolved to walk to it, under the trees, planted chiefly on terraces, from among which peeped out snow-white houses, and here and there, a little farther off, several no less white villages, half-buried cuts, or water-courses, at the bottom of wall-sided volcanic looking ravines, all covered with a dense foliage of trellised and festooned vines, thickly interspersed with fig-trees. Nothing is more remarkable than the richness of the vegetation on the sides of such mountains. Mr. Lyell says, speaking of an ancient volcano on the island of Ischia,—“The cone of Rotaro is covered with the arbutus and other beautiful evergreens. Such is the strength of the virgin soil, that the shrubs have become almost arborescent; and the growth of some of the smaller wild plants has been so vigorous that botanists have scarcely been able to recognise the species.”* Above all rose the sharp, white-topped peak of Epomea to the height of more than 2600 feet, which we resolved in due season to climb.

Long before the boat's nose touched the sand a dozen men ran nearly up to their middle in the water to encumber us with help. Some led donkeys, some carried long planks to assist our disembarkation, and some merely volunteered their general services. But all were so eager, and so uncontrolled by any sort of discipline, that we had no small trouble to force our way through the crowd—especially that portion of it which consisted of the don-

* Lyell's Principles of Geology, vol. ii. p. 151. Sixth edition.

keys and their guides, who were beyond measure displeased and astonished at our preferring a walk to a ride.

Our first expedition was marvellously ill-arranged—seeing that we took for it the hottest period of the day, viz., from half-past ten to half-past two. We had intended to have made a second trip after dinner, but being much heated and exhausted by the excursion in the sun, we were fit for no more, and thus lost the only good time of the day in lounging idly about the gardens and long covered avenues of vines by which they were intersected.

A very considerable portion of one's pleasure at such a place is destroyed by the begging habits of the Italians. It is not that we meet with an occasional beggar, or an occasional dozen beggars, but it is every man, woman, boy, girl, and almost every infant, that begs, and who seems to think of only one thing—namely, how he, she, or it, can pillage the stranger most successfully. At every turn of the road, in every street, before every house, a group of Ischians stood in wait for us. I need not say that all the advantageous points for views were occupied with the skill of military science taking up positions of strength,—so that nothing could be enjoyed in peace. For these sturdy suitors, feeling no shame, nor an atom of delicacy, patience or forbearance, pressed forward, interrupted conversation, intercepted the view, and thought of nothing whatever but how most effectually to engage our attention to their importunate and unreasonable demands. This would be very distressing were the people really objects of charity, or even were they paupers by profession: but we were often assailed, not only in Ischia, but elsewhere in Italy, by the respectable, or at all events by the well-dressed, respectable-looking inhabitants of the towns and villages through which we passed. The manner, indeed, in which the whole population sometimes joined in the chase of the strangers, rendered a walk or even a ride any thing but a pleasure.

From the same cause it happened that in making our pecuniary arrangements in many parts of Italy, we found so little good faith or fairness of any kind in their deal-

ings, that we were gradually provoked into a degree of suspicion which, though sometimes unjust, generally upset our temper, blinded our judgment, and too often ended by making us not only rude in our bearing towards the natives, but as hard in our transactions as any Jews. At least such was the effect on me. I began by feeling in the most kindly way towards the inhabitants of that fairest of lands; but they so frequently obliged me to consider them cheats and beggars, that I found myself becoming not only distrustful, but habitually uncourteous to them. As I found this very disagreeable, I managed from that time forward, whenever I could, to make all my payments as well as bargains by deputy, in imitation of an excellent plan adopted by a wealthy and kind-hearted friend of mine, who, on undertaking a journey to Italy, invited a gentleman of his acquaintance to accompany him as his purse-bearer, and whose office it was to attend to all money matters whatsoever, without letting him know a single word about the matter. In this way, while his own serenity was never disturbed by this pettiest of all sources of discomfort, his companion travelled free of cost; and I am told that after all expenses were paid, perhaps only a few pounds were disbursed over and above what the same journey might have cost had every scudo of every tavern bill been contested, and the party kept in hot water from the beginning to the end of the journey!

Nevertheless we enjoyed the delicious quiet of the Sentinella very much, after the hurly-burly of Naples, along the rugged pavements of which an endless double string of carriages roll, from daylight till midnight, creating a sound fatal to all repose. The air of Ischia felt so pleasant and fresh in comparison to the dusty atmosphere of the capital, that from ten at night till four in the morning I never started tack or sheet, according to nautical phrase. But when the daylight breached the apartment and invaded us by the open window, I rose, and, looking out, saw the enchanting landscape of the day before, now all bathed in dew, and the top of Epomeo on the left, far up, lost in the clouds.

I had made an arrangement overnight with a companion, to climb the mountain in the morning before breakfast, but as I found that six hours' sound sleep had not above half repaired the fatigues of Naples and Vesuvius, I barred out the sun and left the picturesque to take care of itself, and with a very faint sigh gave over the mountain to earlier and more energetic walkers. We breakfasted at nine, and then talked of embarking to return to Naples, but the day threatened to be so intensely hot that after holding a conference with the Padrone of our boat, it was agreed to wait till two o'clock, by which time, he assured us, the sea-breeze would be at its height, ready to carry us swiftly back to Naples.

This delay in starting suggested the idea of still making out the peak, but, as is usual in such cases, we lost nearly an hour in irresolution, talking of the hows and wherefores, the pros and the cons, instead of scrambling up the mountain side, and it was eleven before we made up our minds to go at all, thus leaving ourselves only three clear hours for the job. The sun was shining fiercely, the path rose like a bricklayer's ladder for steepness, and scarcely a breath of air blew into the ravine along which we had to find our way. The guide, unlike our sluggish friends on Mount Etna, or the more considerate cicerone of Vesuvius, insisted upon going up at such a pace, that in order to give ourselves any chance for breath, we had to stick him, per force, in the rear. This was an odd place for a guide, and one which he disliked exceedingly; but after various trials we found this the only scheme for keeping him back.

When we gained the summit ridge, we came all at once from the sultry heat of the southern face of the mountain into the enjoyment of the cool air of the sea, sweeping in from the westward, and rippling the water as far off as the horizon. We had thrown off our coats, waistcoats, and neckcloths, but we were fain to replace them here, seeing that we were about as completely drenched as if we had been visiting the famous vapour-baths of Ischia. The road then took a turn and carried us along the sharp edge of the top ridge to the highest summit of all, which commanded a complete view of

the island, not only from end to end, but along both its sides.

The jolly old hermit, celebrated in the guide-books, received us joyfully, and entertained us not merely with his appropriate beverage, water, from a spring which we were surprised to see issuing from the rock at such an altitude, but with generous wine, both red and white. The top of Epomeo is 2605 feet above the level of the sea, and consists of tufa of a greenish hue, which Mr. Lyell says has been clearly shown to be a subaqueous formation. This curious geological fact is ascertained by finding strata, consisting of shells and other marine products, intermixed with the volcanic ashes, cinders, and lava, which constitute the staple of the mountain. No doubt a prodigious lapse of ages must have been required for the deposition of this immense mass of alternating beds of volcanic and marine substances—all going on at the bottom of the sea, and probably very long before any of them began to show above the level of the ocean. Perhaps an equally long period may have elapsed between the time when they first began to emerge, and the period when they attained their present elevation. But what is beyond measure interesting and deserving of the attention of every visiter, is the obvious fact that, during this last interval, various eruptions of lava have taken place from the sides of the mountain—some of which are even within the range of history—but the greater number lie far beyond all mortal ken—except, indeed, where that ken is aided by the light of philosophic inquiry into the arrangements, and order of dates, which nature permits us to examine.

Some geologists have expressed an opinion that Epomeo is merely a portion of a great volcanic cone, formed above the sea like that of Vesuvius. They do not tell us what has become of the remaining four-fifths of the cone, though they insinuate that they have either settled down into the earth from whence they came, or that they have been blown into the air and scattered about the bay! Mr. Lyell, who is of another faith, considers that Epomeo is not a portion of “an habitual volcano like Vesuvius,” as Mr. Scrope supposes; and this he thinks he has

fully established by the discovery of strata containing marine shells only 800 feet lower than the top of the mountain. Some enormous volcano may have existed, or, rather, *must* have existed in the neighbourhood, the successive showers of ashes falling from which into the sea, during the lapse of thousands of centuries, together with occasional streams of lava from its sides, would, in time, not only form submarine strata as thick as Epomeo is high, but furnish materials out of which the heights of Camaldoli, those on which Naples is built, and other ranges of hills, may have been produced. The famous grotto of Posilipo, which is a tunnel about a mile in length, is cut through a branch of one of these ridges, and enables us to examine the strata to great advantage.

We had tight work to reach our boat within the limits specified by the padrone; but the gale, as he had promised, being propitious, we skimmed past Procida, rounded the Cape of Misenum, looked into the celebrated port of that name, crossed the bay of Baiæ, and dashed past Pozzuoli, or, as it used to be called, Puteoli, where St. Paul remained seven days before the commencement of his journey to Rome, after the fatigues of his sea voyage. We also saw distinctly the smoke rising from the district well named the Solfaterra, then coasted along the Island of Nisida, and lastly hauled round that exquisite promontory the Vomero, which forms the western horn of the crescent of the inner harbour of Naples—as Ischia and Procida form the boundary of the great bay on the west.

On the next day we enjoyed almost a complete rest from the labour of sight-seeing; contenting ourselves with a drive to the Grotto del Cane on the banks of the Lago d'Agnano. This is a natural grotto, in which the air is so noxious that when a dog is taken in he is presently suffocated in the carbonic acid gas, which, by reason of its being heavier than common air, covers only the floor of the cavern. Thus a man can enter it in safety, while the dog is, as it were, drowned. It is then dragged out by a cord, after which, with some difficulty, he is restored to life. It may be useful to know, that the best method of recovering either an ani-

mal, or a human being, poisoned by this description of gas, is to plunge them suddenly into water, over head and ears. As our ladies, however, objected to all parts of this exhibition, we contented ourselves with seeing a torch extinguished by the gas, a substitution with which I thought the two doggies were rather disappointed, on being left outside the door. Who knows that carbonic acid gas, by long use, may not become agreeable? To most persons tobacco smoke is at first fully as poisonous; and I have seen people eat and drink various things, which I need not name, with the utmost relish, though not a whit less deleterious than the climate of the Grotto del Cane to the rest of the world.

It does not seem worth while to mention how many times we went to the museum at Naples, nor to say what we saw there. Heaven knows, the fatigue of perambulating such a wilderness is enough without the labour of attempting to describe it. I do not know how it is with other people, but to me the pain and grief of any museum are excessive—for the feeling I have on going through it is quite akin to that of reading a jest-book. No one can deny the quality of the good things, but they are almost all out of time and place; and even if you do happen to be in a good vein on entering, your spirits are sure to be damped by the excessive crowds of objects expressly set up to be admired.

If, indeed, we are in search of information on any particular topic, and have strength of mind to go straight to that part of the museum which contains the object of our curiosity, well and good; but if we allow ourselves to be seduced to the right or left, we are lost for that day! With respect to the many acres of museum which one is compelled to wander over at Naples, it may be said that the hours are sadly inconvenient, especially in the hot weather, viz. from nine till two, when the suffocation approaches so near to that of the Grotto del Cane, that I have often expected the fate of the poor dogs. According to the begging and pillaging system of the country, the whole museum is divided into small departments, the cicerone of each of which expects to be fee'd. It signifies little to be told that they have no right to any

thing, and that they dare not ask it—but there are plenty of ways of asking without breaking the letter of such a law—and the fact is, that it becomes quite impossible not to give money to this adroit variety of the beggar class.

The only way it is found out sooner or later, is to pay them off the moment they attack you, otherwise your comfort is entirely destroyed by their pertinacity. It would be a great happiness, no doubt, if you could pay once for all at the door—but this would be contrary to rule, and would assimilate the custom of payment, forsooth, with that of England! And yet one hears the English people at home, holding up the liberality of the continental practices in these respects, and declaring, in the face of truth and experience, that every thing is seen for nothing. Let them try!

But if we failed in our duty to the museums of Naples and Portici, we made it up by our attention to old Vesuvius, the father of them both. It is curious, by the way, to consider how the volcano is the cause—the very origin or fountain-head—of these great collections. Sir John Herschell, in his charming book on astronomy, with his wonted elegance of fancy, and closeness of reasoning, shows how the sun is the source of almost all the natural movements which take place on our earth. The heat of his rays draws up the vapours which form the clouds, and sends down the rains which produce the rivers that wear away continents. In like manner, to compare small things to great, Vesuvius is the cause of most of the locomotion at Naples, as we witnessed during the several eruptions which took place while we were there, exciting the natives fully as strongly as ourselves. But I was speaking chiefly of the museums, the contents of which are the result of the volcano. How, for instance, could we have the pots and pans of Herculaneum and Pompeii, the pictures, the statues, and the thousand and one remnants of those ancient cities, but for the conservative power of the tufas and ashes which covered them up? Go into any one, or all, of the compartments of the museums at Naples, and you will find that the adjacent mountain is directly or indirectly the source of the whole supply.

This being the case, and the proximate cause both of the good and the evil of such a neighbourhood being at that moment in full operation, the temptation to examine it closely naturally seized upon all minds, and set all the world, foreign and domestic, in motion—for however much we might dread the fatigue of the museums, it was impossible not to sympathize with, and accompany the rush which all the Neapolitans made towards Resina, during the eruption of the 7th of July.

We had chalked out a little tour to Salerno, Pæstum, Amalfi, Sorento, and Castellamare, and back by way of Pompeii to Naples, and had made our preparations accordingly. But when the sun went down, and the darkness made the wonders of Vesuvius more visible and even more striking than they had been on the preceding nights, we resolved not to let the present moment slip by, in hopes of a better opportunity—which might never arrive: accordingly we sent off an express to our friend Salvatore to hold himself and eight donkeys in readiness.

On reaching the Capo's house, however, the clouds had begun to settle over our heads, and sundry ominous rain-drops to fall at intervals—symptoms of a storm which made the old gentleman shake his head, especially when he saw that we had improvidently brought only one cloak among seven persons. The older members of the party sided with the guide, and cried a halt in the operations; but the children were so much distressed at the thoughts of being baulked in their expectation of seeing an eruption on the grand scale, that it was resolved, after about an hour's delay, that we should start.

As the clouds seemed a little to clear off, we mounted our donkeys and took our chance, and well were we paid for our boldness. We had no intention this time of going up to the top of all; and as we knew that the eruption of which we wished to have a nearer view was to be seen quite as well, and in some respects better, from a well-known spot about a mile beyond the hermitage, where a cross has been erected, to mark the site of a murder, and there, accordingly we proceeded without stopping. Our object was to be able to see, at leisure, and from a convenient and safe distance, the

unusually large stream of lava which, as we had observed at Naples, was then flowing over the edge of the crater or cup in the higher regions of the mountain.

At the time we placed ourselves under the cross, there was flowing down the side of the cone, past its base, and rushing nearly down to that part of the valley abreast of us, one huge unbroken stream of liquid lava, about half a mile wide at its extremity, which was then distant from us three or four hundred yards. The monster, as it rolled along, pushed before it a vast pile of red-hot cinders and ashes, and immense fragments of detached rocks, so as to produce a loud crackling and tinkling noise. The colour of this stream was a brilliant pink, much brighter at the sides than in the middle, where, either from the cooling of the surface, or the accumulation of cinders and broken pieces of stone, a sort of dark ridge, or backbone, was visible from end to end, not unlike the Morain on the top of a glacier. This reminds me of a curious analogy which often struck me between two objects so dissimilar in their nature as a glacier and a lava stream. They are both, more or less, frozen rivers, they both obey the law of gravitation with great reluctance, being essentially so sluggish, that although they both move along the bottoms of valleys with a force well-nigh irresistible, their motion is sometimes scarcely perceptible.

Cultivated fields, vineyards, and corners of villages, all but obliterated, peep respectively from beneath these overwhelming masses of intrusive matter, which, except in the qualities of heat and colour, sometimes resemble one another in the most remarkable manner.

While we sat admiring this stupendous sight, and tracing the glowing flood from top to bottom, without being able to decide which part was most to be wondered at, all was so striking and beautiful, and while we were saying to each other that nothing could by possibility augment the grandeur of the sight, our attention was suddenly and joyfully called by the guide to a new object of interest. His experienced eye had detected the first traces of a fresh eruption; and on looking to where he pointed, we discovered a narrow line of bright light

extending horizontally for about a hundred yards along the lip of the crater. This proved to be the end of a new stream of lava, which presently boiled over, and flowed down the side of the great cone. Within a few minutes afterwards another stream made its appearance, so that in a little while we had three burning rivers in sight, one on each side of the main flood!

It was the opinion of the guide that in all probability these three streams had a common origin, but that the supply of liquid matter had become too great for the centre channel to carry it off, and thus two offsets, one to the right, the other to the left, had taken their departure, just as large rivers flow off on both sides of the Mississippi, when the rains in the upper country swell the main stream till it rises above its banks.

Be the cause what it may, nothing can be imagined more grand than this triple cascade of fiery matter, pouring down the jet-black sides of the mountain; and I verily believe we should have sat there all night, had not we got warning to quit in a most disagreeable manner. It was pitch dark and more gloomy than usual; for the moon, only one day old, had set shortly after the sun, and the sky being overcast with a dense cloud, every star was obliterated. The effect of this degree of darkness was to conceal from our view every thing, high as well as low, in the landscape, excepting only the three streams of lava, and the upper line of the great cone, which could barely be distinguished against the sky. At first, one might suppose that this extreme darkness would have been rather favourable than otherwise to the effect produced by the self-illuminating rivers of molten rock careering down the sides of the volcano. But I rather think, from various analogies, that a clearer sky, and even a tolerable share of moonlight, would have helped the general interest of the scene. It is well known that the illumination of a town is always greatly the better of a full moon, whose presence is so little noticed in the bustle, that the lamps and candles get the credit of lighting up a thousand objects which would be invisible but for this unpretending assistance.

By-and-by the thunder began to grumble, and the

lightning to play ; an interference the worst-timed possible, for it quite destroyed the interest of the volcanic picture. A tornado among the mountains is always a grand affair ; but as we had come to look at the eruption, not to witness a thunder-storm, we affected for a time to despise its warning. But when the flashes became more and more brilliant, the peals nearer and more directly over-head, the clouds still more black and threatening, we began to attend to the reiterated entreaties of the experienced Salvatore, whose interest in his favourite volcano had quite merged in his alarm lest his party should get drenched to the skin. To brave a storm of this sort is proverbially a losing game, as every one must have experienced who has trusted to boat-cloaks or mackintoshes, or to any kind of shelter but that of a house. So we wrenched ourselves away from our position near the cross, and hurrying down the hill, as if whipped on by the lightning and scolded by the thunder, just regained the hermitage, as the first drops of one of the most furious showers I ever saw came on, accompanied by a terrific squall of wind, threatening to tear up the old hermit's trees by the roots.

While we chuckled at our own good fortune in getting housed in time, we could not help compassionating the fate of a party of ladies and gentlemen who had preceded us, and who, probably not seeing the squall coming on, or fancying they might brave it with impunity, had rashly ascended the cone. We could just distinguish their torches, near the top, as the clouds began to concentrate their forces for the attack ; and as there was no shelter where they were, they must have got finely soured.

In the hermitage we found another large party, driven in, like ourselves, by the storm. These were chiefly officers of an American ship of war lying in the bay ; and the hermit, who was in a fine bustle, thrust us all, men, women, and children, into one large vaulted room with a great table in the midst of it, large enough to have supped a couple of dozen travellers ; but as the old boy could give us nothing to eat, and only some wretchedly sour wine to drink, we converted the venerable man's

table into such a bed as one sees in a guard-room, and bestowed ourselves upon it. Under the influence of our past labours, we enjoyed, in spite of the loud rattling of the storm, a full hour's sleep. Our repose might have been longer, had not we all been roused up by a furious noise below stairs, caused by the sudden intrusion of a donkey among the guides and muleteers, who, imitating our example, were taking a sleep. As they had no table, and no lamp, when the donkey ran in, he trampled on the men right and left, and as fast as each one received a squeeze or a kick, he repaid it with interest on the poor beast, which was thus driven from pillar to post in the dark, while the whole party bawled out murder! thieves! robbers! till we thought a new eruption of the volcano must have broken out under the hermitage!

On the tumult being appeased by the expulsion of the well-belaboured ass, and the roaring of the guides and drivers turned into a loud laugh, I looked out of the window, judging from the stillness of the night that the thunder-storm had passed. The sky was now filled thick with stars, and by the transient blaze of a distant flash of lightning, I could make out the circuit of the bay of Naples, round which a string of lamps pointed out the situation of the numerous and almost continuous towns which lie along the shore. In front of the window, as I looked to the west, I observed that all the sides of the trees facing the mountain were lighted with a red glow; and on running out to gain another view of the volcano, was delighted to find that while we slept and the storm raged, the lava had been hard at work, for now the whole hill-side had become one mass of liquid fire, by the three streams coalescing. The effect of the scene was unquestionably augmented by the diminished intensity of the darkness, for, independently of the unusual lustre of the stars, which were all twinkling vehemently, as if amused at the glorious eruption, the radiation from the great mass of lava which enveloped the whole of that side of the mountain with a cloak of fire, rendered the great cone, and one side of Monte Somma, as well as much of the intermediate ground, distinctly visible.

CHAPTER XII.

TRIP TO SALERNO—A CAPSIZE—AMALFI—SORRENTO—MOUNT
ST. ANGELO.

BEING now pretty well satisfied with eruptions, and tired with museums and other exhibitions, we broke from them all, and set off upon an excursion to Pæstum, and to the various points of interest lying on both sides of the lofty promontory which, projecting far into the sea, form the south side of the Bay of Naples, and the north side of the Gulf of Salerno.

As our object was only to reach the town of Salerno in good daylight on the evening of our little trip, we did not start before two o'clock; and not being particularly smitten with any of the inns which we passed on the road, we stopped to dine under the shade of some poplars supporting a verdant wall of vines, dangling in rich and close festoons from tree to tree. A heavy thunder-storm had, fortunately for us, passed over the spot an hour before, drenching the thirsty ground, and rendering cool and clear the sultry atmosphere, in which we had long been well-nigh choked.

Thus refreshed, internally and externally, we began to wind about among the hills, but so gentle was the ascent that we were quite unconscious of the height we had attained, till on passing over the top of the ridge, we commenced our downward course on the south side of the promontory. As the road was excellent, we bowled down at a great rate, admiring as we went along the gorgeous valleys and wooded precipices of this picturesque neighbourhood, well known as the fa-

avourite haunt of Salvator Rosa, the great painter of wild scenery. It struck us, however, that almost all the landscape through which we passed, except here and there a rugged mountain-top, partook of a far softer character than belongs generally to this artist's works; so much so that we thought it probable that on quitting the road, on either hand, for a short distance the scenery might become wilder and sterner. In this suspicion we were afterwards confirmed, when we made an expedition from Castellamare.

The high road from Naples to Salerno, like all well-conducted mountain passes, studiously avoids those regions which a painter most covets, being carefully carried, by means of spirit-levels and other devices, along the lowest parts of the pass, making long sweeps rather than go over the smallest obstacle. For obvious reasons these are the most cultivated districts, where the smoothing hand of the agriculturist removes those asperities which it is the province of the painter to appropriate—sweeping away, without any regard for the picturesque, all the old, and to him useless trees, and withered stumps which to the painter are more valuable than the freshest foliage. Instead of broken down bridges, rudely formed of rough logs, placed between the angles of projecting rocks, we have now smart arches, turned in well pointed masonry; and in lieu of savage-looking huts seeking shelter in ravines, we see brisk country mansions crowning all the most prominent heights, with whitewashed walls, and glazed windows, smirking over pleasant lawns and well-fenced walks. All these, though redolent of good cheer and comfortable elegance, are fatal to that severe simplicity and grandeur of nature which, all untouched by the hand of man, had won the love of Salvator, and by teaching him the mysteries of his art, enabled him to record for the benefit of posterity many wild and beautiful scenes which we now look for in vain.

This reminds me how often, in travelling in Italy, we come to spots celebrated not only by the artists of past

days, but by the ancient poets and historians, the most striking features of which are now entirely obliterated from the face of the earth. The number and variety of such scenes must of course depend on the extent of the observer's classical recollections; but the whole country is so rife in objects of this nature, that even to untutored persons, scarcely a league can be gone over without the occurrence of some such association. Addison says, prettily enough:—

“Sometimes misguided by the tuneful throng,
I look for streams immortalized in song,
Which lost in silence and oblivion lie;
Dumb are their fountains; and their channels dry,
Yet run for ever by the muse's skill,
And in their smoother numbers murmur still.”

On leaving the gorge of the mountains selected by the picturesque-destroying road-makers, we came suddenly in sight of the sea, an object which defies even their art to spoil,—with the noble Calabrian mountains on the east and south-east; and before us in the south, the Gulf of Salerno, which, though much larger than the adjacent bay, is destitute of its surrounding charms, viz. the volcano, the city, and the islands, which have justly given the Bay of Naples the first place in that description of scenery. Our road almost overhung, and in some places actually did overhang, the water; and had not our nerves been long ago strung by the beetling precipices of the Corniche road between Nice and Genoa, and by the Spezzia, which lies south of that city, we might have felt rather uncomfortable in passing by the totally unprotected edges of these precipices. But as we had not yet been schooled by any accident, we felt no apprehension, and wondered that any body could be so silly as to care for such things. So we trotted along merrily, admiring alternately the sea and the land, and expressing our admiration of those beautiful villages Velletri and Salerno, which look so very fair at a distance that it is a pity they should ever be entered.

Suddenly, in the midst of our confidence and raptures, the horses made a start to one side, the coachman by his gesticulations gave symptoms of alarm, and in the next minute we were off at a gallop! It was now clear that we were in for a serious adventure, but whether we were to go over the cliff, to the right, or up the bank to the left, remained to be seen. As we were in an open carriage, I could see that the right hand, or off rein, had broken, and the coachman losing his presence of mind, (if, indeed, the fellow ever had any to lose) pulled tightly on the remaining part, a proceeding which of course brought the horses heads round to the left, and carried the near wheels up the steep slope or *talus* of rubbish lying at the base of the cliff. Had it been the left or near rein instead of the right which broke, and the same measure been pursued, we should inevitably have been dashed into the sea, over a rock three or four hundred feet high!

Fortunately, too, just at this precarious moment, when an upset was obviously inevitable, the horses slackened their pace, and I had time to enjoin my party to grasp firmly whatever fixed part of the carriage they could seize hold of, and to jam themselves together as tightly as possible into one mass. Scarcely had I issued these orders when over we went—at first so slowly that we had time to be fully aware of our fearful predicament—but gaining velocity as we came to the ground, we were all pitched out with a severe crash! Guessing, from the appearance of the stranded wreck, that the carriage must be lying on the legs and arms of the females, my terror was, that the horses, now released from all control, and startled by the sound of the overturn, would start forward, and consummate the mischief by dragging us, pell-mell, along the road! The cloud of dust thrown up by our fall, gave us the appearance of so many heathen gods and goddesses emerging from one of those convenient screens in which the poets hid the very questionable deeds of their deities; but it was

soon ascertained by mutual hurried inquiries and breathless replies that no one was seriously hurt.

The carriage being open, not only the passengers, but their maps, road-books, and drawing materials, were all quitted out in a shower, and fell to the earth in one indistinguishable heap. While this was going on within, the coachman, who was the cause of all the disaster, accompanied by the provision-basket at his feet, and by the innocent and unconcious laquais at his side, being projected along the sky in a wider orbit than ours, performed a joint somerset in the air, like one of Herschel's triple stars whirling in space! This was all consistent with the laws of centrifugal and centripetal forces, but what was strange, I had time, during the progress of this aerial feat over our heads, to speculate upon, and regret the inevitable escape of the gravy from the inverted pasty! And such is the odd fabric of our minds, that this mighty misfortune of the pie occurred to me as a fit matter for consideration, at a moment when it seemed probable that half the limbs and perhaps the necks, of the party might be broken!

On picking ourselves up, however, we found no killed and few wounded, and none severely or dangerously. By the help of some good natured peasants who ran to our assistance from a vinefield hard by, we soon righted the carriage, proceeded to Salerno for the night, and next day, though we were all very stiff and sore, visited Pæstum. Of this celebrated spot I shall say nothing except that on returning to it after a pretty busy interval of sixteen years, during which I had visited some of the most interesting spots on earth, I looked upon the Temple of Neptune only with increased admiration.

The country in that neighbourhood struck my eye as being less desolate than it had been; there were many more houses and inhabitants, and, paradoxical as it may appear, I have some reason to believe that this change has been brought about by the melancholy fate of an English lady and gentleman who were killed some years ago on their way to the Temples. The story is

well known. The travellers, having heard much of the dangerous state of that neighbourhood from the numerous brigands, thought they would guard against robbery by taking arms with them—forgetting, probably, that the use of weapons in defence provokes their use in attack; and that in all such contests the chances are greatly in favour of the more experienced and reckless party.

On this principle, I never allowed a sword or pistol, or any other kind of weapon, to be carried in my carriage. Even when I was not commander-in-chief of the party, on my first visit to Italy, I had influence enough to persuade my companions that it was by far the wisest plan to travel totally unarmed. In the first place, if a gentleman have arms in his hands he feels called upon to use them if attacked, and whatever be the odds against him, he must fight it out as he best can. In war, the stake of honour is such a high one, that life or limb must count for nothing in the game. But in pleasure travelling, when the only consideration is that of a watch, or of a few ducats, it does seem immeasurably folly to incur not merely the risk, but almost the certainty of being wounded, if not killed, as poor Mr. and Mrs. Hunt were at Pæstum, for making fight rather than give up their purses!

The brigands of Italy, Spain, and other countries in which such lawless deeds are made a matter of business, can always ascertain, beforehand, at the inns where the travellers stop, what are the numbers and force of the party, and what the description of their weapons. With such exact information, they would be greater fools than we know them to be, if they failed to take local advantage of the strangers, and to attack them at such times and in such manner as to ensure them the victory. At best, what are we to gain in such a struggle? It is certainly very disagreeable to be robbed; but would it be a pleasant item in our diary to record that we had shot a Calabrian peasant? or even that we had wounded half-a-dozen of them in the scuffle? On the other hand,

even if we escaped the terrible fate of the travellers above alluded to, the fact of our having beaten off the robbers and saved our ten or twenty scudi, and an old turnip of a watch, would scarcely make up for a shot through the arm, or mayhap through our nose, to say nothing of the arms and noses of the ladies of our party!

After all, the chances are greatly against meeting any robbers any where. I have gone over a good deal of very suspicious ground in my time, and I never encountered but one, and that was in Peru, then torn to pieces by foreign as well as domestic war, when all the bonds of society were untied, and ruffianly soldiers roamed unrestrained about the country in search of food and booty. Those whose duty obliges them to travel in the midst of such scenes, must of course go not only well armed, but in strong parties. As this, however, is quite a different affair from travelling in Italy, I should strongly advise all persons, not only not to carry arms on such a journey, but when they can, to avoid taking an escort, inasmuch as they may be quite sure that the guard will be the first to make off when the robbers have been attracted to the spot by their additional clatter, and by the prospect of such a good fat prize, as is implied by the fact of an escort being required to protect it.

For the rest, it would really seem as if the murder alluded to near Pæstum, had so far roused the Neapolitan government to a sense of their duty as to induce them to take vigorous measures for suppressing the robbers in that neighbourhood, and by the establishment of an efficient police, to guarantee the security not only of passing travellers, but of the resident inhabitants. And this, I take it, is the main cause of the gradually increasing population of the desolate region near Pæstum. The malaria, no doubt, will for ever prevent its becoming a healthy spot, but as there appears to be abundant evidence to prove that the air of all such districts is less noxious when inhabited than when left entirely waste,

the motive to people it will go on increasing with every fresh settler, and the time may come when the temples of Pæstum will again be surrounded by a city.

We returned from our excursion in good time to dine leisurely at Salerno, and then to proceed to Amalfi, a most singular place, the houses of which are built in little nooks, like sea-birds' nests, on the side of cliffs almost perpendicular. The inn where we slept had formerly been a Capuchin convent, which had been suppressed, and the monks expelled, in consequence, we were told, of the "irregularity of their manners." If all be true one hears of those orders, I should like to know what kind or what degree of irregularities in friars, renders it fitting to cashier a convent! Be this as the state of the times may regulate, the lodgings assigned us in what used to be the monks' cells, we found were as good, though somewhat of the smallest, as those of any inn on the road. The landlord's daughter, as pretty a lass as the jolly monks of old could have imported as a lay sister, in their most palmy days, seemed perfectly at home; but as she tripped about the cloisters, and made free with the cells, she looked so very comically out of place, (as indeed she was,) that our mirth was excited more than once, to her great discomposure,—unconscious as she was of the incongruity of her presence there.

If, however, we smiled at such things, it made us melancholy, to witness the work of destruction going on in the chapel of the convent. The altar, long desecrated, was half picked down with crow-bars, to furnish paving-stones for a stable in the adjacent refectory; the floor, ripped up for firewood, was covered with piles of bricks and heaps of mortar ready for baths and boudoirs. The roof and walls, stripped of their pictures and gilding, looked like the skeleton of the building. In the little side chapels, formerly sacred to prayer and penitence, saints and martyrs were tossed about among broken-down holy-water cisterns, and, here and there, lay a half-demolished, tattered virgin! And in the aisles

we stumbled over prostrate crosses, and fragments of images once honoured, now trampled on!—the whole scene vividly recalling to my recollection the churches of a town I had seen sacked by the French in Spain many years before.

In Roman Catholic countries we are so much accustomed to see all these things so highly respected, or at all events treated with such external marks of reverence, that it shocks even those who abhor the worship of stocks and stones, and hold light the gilt and glitter of those painted sepulchres, to see their once venerated relics pitched about by the rough hands of clodhopping work-people, busily employed in turning the holy temple of God into a vulgar table-d'hôte!

We left Amalfi in a row-boat, on a beautiful July afternoon, and so stout and practised were our men, that, by keeping close in-shore where the water was smooth, we made head rapidly against the fresh sea breeze. As I really do not know when or where I have seen so singular a coast, I should recommend every one who can spare a day to make a similar excursion, if the season of the year admits of boating. The cliffs are at most places perpendicular, or very nearly so; but every now and then there occurs a little valley, or a ledge of rock less abrupt than the rest, and there you may be sure of finding a small village, or at all events a house or two, and sometimes a tolerably respectable sized hamlet, looking down on its diminutive "marina," or fishing beach, with a cluster of fishified huts, and still more fishified inhabitants, clinging like cockles to the faces and edges of the rock. The whole line of this coast is also most singularly embellished with vine and fig trees, arbutus and myrtle growing, in most instances, on a soil artificially supported by a succession of walls rising in terraces, step above step, in a wild and curious fashion, nearly to the top of the mountains. It may be useful to remark that the rock along the whole line of this promontory is not of volcanic origin like most of the ridges thereabouts, but of limestone, the strata of which

are so arranged that they dip down to the north-west and are turned up to the south-east. The consequence of this geological disposition of matters is, that while that side of the promontory which looks on the bay of Naples is comparatively smooth and placid, in the character of its landscape, that which overhangs the gulf of Salerno is every where bold, rugged, and precipitous, and from its showing the broken edges of the strata, instead of their smooth backs, as on the other side, the southern scene is rendered one of great asperity.

I need scarcely say that these circumstances add much to the picturesque effect of the coast near Amalfi, and I should recommend sketches of such scenes to study carefully the geological features of their landscape, since an adherence to the truth of nature in the peculiar arrangement of the strata always essentially helps the characteristic effect of the drawing.

The stern character above alluded to, of the coast forming the north side of the gulf of Salerno, is relieved from all appearance of desolation by the extraordinary degree and beautiful kind of verdure, partly natural and partly the result of cultivation, which clothes it from end to end. I say nothing of the animation given to this scene by the villages and innumerable scattered houses, all as white as snow, and most of them placed as prettily for picturesque effect on conspicuous knolls, or projecting ridges, or in the bottom of snug glens, or fringing little bays, as if the sole purpose of nature in getting up such a beautiful and diversified prospect had been to furnish painters with objects of study, and amateurs with topics of hopeless description.

After a pull of three hours we reached a landing-place worthy of the rest of the coast, called the Scaricatoja. A very steep climb gained the sharp summit of the promontory, a point which never fails to prove more interesting than any other, from the double views which it commands. On this occasion we overlooked two of the noblest bays in the world. On the south the sea in the gulf of Salerno washed the foot of cliffs about two

thousand feet high of sheer perpendicular height. On the north lay the plain, or rather the gradual slope of Sorrento, covered with a mass of richer verdure than I think I ever saw before in any country. Such, indeed, is the thickness of this superabundant foliage that the town of Sorrento makes scarcely any show at all, being almost smothered in vines. Even the single country-houses or villas are "bosomed so high in tufted trees," that, in many instances, we could detect only their turrets, and on coming to the town itself we scarcely discovered the buildings of which it consisted. Here and there was a patch of houses, scarcely to be called a street; but presently we lost ourselves again in the wilderness of leaves. The smothered-up feeling which such a rank state of vegetation produces, is rendered still more oppressive by the high walls running on each side of every road or lane leading to the town, and, in fact, on the sides of many of the streets, so as to exclude very effectually the view of every thing but the tops of the trees and the parapets along the tops of the houses. What is worse, every breath of air is excluded—or, which comes much to the same thing, appears to be excluded from these trench-like roads. Like the sun, Mrs. Starke's excellent road-book has spots in it; and I must say that her praise of Sorrento appears to me one of these. It may, indeed, by long habit become a pleasant place to live in; just as we know that the workmen in the Thames Tunnel, when washed out by the invasion of the river, declared that, but for this transient inconvenience, it was the most agreeable residence possible! There may also be some houses from whence a peep of the bay may be caught, but they must be rare. At all events, the sea is so difficult and troublesome of access that it cost us thirty minutes of dusty, suffocating walk, to reach the Marina, or landing place, on the western side of the town, and thirty-five to get from the Cocumella Inn to the sea, on the eastern Marina.

On one of these panting expeditions, through the streets of this invisible, smothered town, we fell in with

no less a personage than the celebrated Madama Starke herself—the identical authoress of the road-book, in full force. Of course we suppressed our feelings about her favourite Sorrento, or limited our comment to the expression of a hope that we might one of these days find out a spot from whence the sea might be made out. The good lady either did not see, or took upon her not to mark the sarcasm, implied in such a criticism on a town lying on the shores of the Bay of Naples; but, with her wonted hospitality, invited us to dinner next day, for which she said we should be able to return easily after visiting the island of Capri and the Blue Grotto.

At four o'clock next morning, accordingly, came the detested rap! rap! at our door, just as we had slept up about half the sleep which was due to us; and by half-past five, we were skimming along in a six-oared galley towards Capri, or, as the natives invariably call it, Crapi, the pet residence of that precious reprobate Tiberius. One of the shows of the island is the ruins of a palace of that emperor, adjacent to a precipice between fifteen hundred and two thousand feet high, over which it was his pleasure to cast all persons who offended him. Our guide, who related to us the whole process with much gusto, suited the action to the word, and as he went through the motions of catching hold of a prisoner, and trundling him over the edge of the cliff, he accompanied the operation by a slight whistle or sound like that produced by the lips when we say the word "whip!" as quickly as it can be articulated. By repeating his movements and this sound at intervals of a second or two, he gave us to understand that when the emperor was in a crusty mood, from a dozen to fifteen persons might be sent over in half a minute!

It is delightful, when one happens to be in the vein to enjoy it, to watch the unbounded faith in all kinds of extravagant traditions with which your true cicerone indulges his victims—which is the best name to give those helpless, because totally ignorant persons, who surrender their judgment to his temporary keeping.

Many people seem to fancy they are guilty of a sort of neglect of duty if, on visiting such a place as Capri, they omit to see any individual thing—good or bad—which the road-books set down. It is certainly the duty of a guide to have all such things at his fingers' ends, and to hold himself in readiness to point them out; but it seems almost as absurd to make a point of seeing every thing, as it would be to read all the words in the page of a dictionary, to which we refer for one or two. Many a bitter sigh, and half-angry remonstrance, however, were squeezed out of our baffled guide when we turned away from his wonders, made no account of his points of view—scorned his piles of antiquarian rubbish, his baths, his villas, his palaces, and pressing on to the beach, re-entered our boat without mounting up 535 steps of Ana-Capri to see nothing, especially as we had already seen it from the sea when entering the bay on our return from Sicily.

But the Blue Grotto, "La Grotta Azzurra," is well worthy of a visit; and repays the little inconvenience of lying flat on your back, in a skiff, on entering. This is necessary in order to avoid knocking your head against the roof of this rather dangerous-looking and certainly most awkward of doors. Mrs. Starke graphically enough compares the colour of the water in this cavern, to that of the large bottles of vitriol with lamps behind them in the chemists' windows in England. The effect of this light on the top and sides of the cavern is very curious, and will not soon be forgotten by any body who has seen it.

We got back, as Mrs. Starke had promised us, in time for her dinner—one dish of which, at dessert, as I never saw it before, I may mention as excellent. It consisted of ripe, juicy figs, cut into slices, and then thoroughly well iced. In the broad and shady balcony behind the house we were shown such a view of the bay as made us recant half our heresies against Sorrento.

Next morning, betimes, it being Sunday, we made an
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effort to reach Castel-a-mare in time for church service, at the house of a friend pretty well up the hill, when we found a congregation of about forty persons.

Our intention now was to return on Monday by way of the ever-fresh Pompeii to Naples; but an old Roman friend whom we met at church persuaded us to make an excursion with him to the top of Mont St. Angelo, which overhangs Castellamare, and is said to be 1,500 feet higher than Vesuvius. This would make it about 5,000 feet above the sea. Signor Capucci, the Astronomer Royal at Naples, told me it was 4,500 French feet, which is very nearly equivalent to 4,800 English. Whatever be the height, I know it is a good sharp climb, and being very steep, is rather fagging on the whole, even with the help of donkeys for those parts which are rideable. Unfortunately, we were over-persuaded by one of the party, who was a great walker, to send back all our donkeys but one for a lady who accompanied us. I mention this circumstance in order to recommend others, not only at Mont St. Angelo, but every where else, to keep their horses, mules, or donkeys, as long as they possibly can, even if they be not used, for their presence is always a help, as affording a resource in the event of utter fatigue.

Long before we reached the top, two out of three of our party were pretty well done up, while our walker skipped from rock to rock at a great rate. I believe I might have done so too, and imitated the mountain goats amongst the myrtles and oaks which grow a long way up the sides of the mountain, had it not been for the shock which my lame leg received when the carriage was overturned near Salerno a few days before. In spite of our fatigues, we reached the very singularly shaped tip-top of all before the daylight was quite gone; and though the view was in some respects very tantalizing, we saw a good deal of both bays.

For the first time we felt ourselves in the true country of the great Salvator Rosa, and could enter fully into the painter's well-known enthusiasm about this part of

the world, in contradistinction to every other. Up to the period of the excursion to the top of St. Angelo, all that we had seen of the promontory had fallen short of the expectations raised by the works of Salvator, and the historical fact of his preference to this district. But we now found the reality so far outstrip the representation as to enhance the painter's merits in a quarter where certainly we had not expected to find proofs of his sagacity. It is often supposed that Salvator Rosa must have exaggerated the scenery of those places; but, on the contrary, it would seem that his paintings are moderate and subdued in comparison to the sternness of the savage beauty of some of the scenes through which we passed. His taste taught him to admire such scenes, but his judgment equally taught him that to attempt an exact imitation was to wander from the rules of his art. He appears therefore to have selected and combined those facts only which were suitable to pictorial representation; and by the skill with which he executed his task, he has given us, not indeed the same, but another, and perhaps not a much less pleasing creation, than the stupendous original from which he drew his inspiration.

The descent of Mont St. Angelo—in consequence of its extreme steepness—proved very laborious and painful. The rugged nature of the path also during the greater part of the way shook us to the very centre. Never shall I forget one place where for a mile or two a set of steps had been formed to assist the donkeys and mules employed in carrying down snow for the luxurious inhabitants of Naples. These steps are placed at the distance of four or five feet from one another, the intermediate space being a pretty smart slope. Even in daylight we had found it difficult to pass over this Cyclopean sort of stair; but first by moonlight, and afterwards when it became dark, it was both troublesome and painful, though I cannot call it dangerous to go down it, for the worst that could have happened would have been a fall on one's nose. The recurring

shock of each step, however, though at first it made us laugh, ended by making us almost cry. My poor unfortunate rheumatic knee was ground and twisted in so many ways, that I could scarcely get on at all—and nothing but absolute necessity could have dragged me along. The ascent of St. Angelo cost us four hours, but five were barely sufficient to bring us down again.

Next day all the party were so done up at every joint and in every bone, that the trip to Pompeii was deferred till we could engage in it with fresh minds and bodies. So we hired a boat and sailed back, without making any stop except for ten minutes at Resina, to learn from Salvatore what Vesuvius was about. The volcano, he said, had gone out so completely since our last visit, that he thought we might now look into the crater with impunity. I requested him therefore to send up a bed for me at the hermitage, my purpose being to sleep there some night, and to start next morning early in order to give the whole day to Monte Somma and the Atrio del Cavallo.

CHAPTER XIII.

A TOUCH OF MILITARY DESPOTISM—TEMPLE OF SERAPIS AT
PUZZUOLI—ENGLISH PREJUDICES—SANTA LUCIA.

As we were driving one day along the Toledo, the principal thoroughfare of Naples, we thought the crowd rather greater than usual ; but the same feeling or something akin to it, having suggested itself almost every evening—for one never gets accustomed to the bustle of that noisy capital—we thought we must be again mistaken. Presently, however, we came successively upon three regiments of foot, marching, not without difficulty, in consequence of the press, on the opposite tack to that on which we were standing. The officers wore crape on their arms, and we learned upon inquiry, that a general officer having died in the morning, he was to be buried on the same afternoon. This seemed rather quick work ; but we had nothing to do with that, so we put about, and drove as near as we could to the scene, and having got into a good corner, waited till the procession passed.

Eight regiments of infantry and one of cavalry marched by in succession, accompanied by a proportionate number of guns. All these troops were particularly well dressed and soldierlike in appearance—what they might prove in action I cannot pretend to say. I was told that the King of Naples had about sixty thousand similar troops which he can bring into the field, though I could never learn what possible object he could have for such an immense force, any more than what his object was in building palace after palace

which he could never use. For the purposes of despotism, a vastly smaller force, it might be supposed, would be more effective, as more manageable, in a country where, say what people like, the great mass of the community are abundantly contented, and have good reason to be so. At all events, they have as good reason to be contented, as any droves of well-fed oxen, living in a fertile country, and blessed with a fine climate, especially when they are not much troubled with the cares springing from too much knowledge. As to how many drovers it may require to keep a given number of cattle in order, or how many soldiers may be necessary for working the machinery of such a description of despotism as comports with the usages of Europe, I cannot tell.

As it is only by little, chance hints, however, that a passing stranger has any means of drawing inferences respecting the state of feeling in a foreign country, either as to its system of government, or the terms of submission by which they are held, I shall relate an incident which I witnessed in the streets of Naples. In the general aspect of the crowd at this funeral, there appeared nothing which could lead one to form a guess whether the people were subdued, or cowed, as it is called, or whether they were likely to feel indignant at any act of oppression, still less whether they would have spirit enough to resent it. Every one seemed to be pleased with himself and with his neighbour, and with the government which got up such shows for his amusements. All the world were laughing, chatting, eating ices and fruits, or smoking cigars, rambling about in merry parties, mostly in carriages crowded to the last inch, and dashing along at a gallop—all astir and apparently enjoying life to the utmost.

While the crowd were waiting, an officer in uniform rode along, and a coachman passing him, either did or said something which displeased the man of war, upon which he whipped out his sabre, and with all his force laid it on poor Jehu's shoulders! Half this force would have been sufficient to have cleft the driver's body in

twain had the edge of the sword, instead of the flat part, been applied to the offender. And this, by the way, illustrates the kind of difference which exists between Asiatic and European despotism. In Persia, the driver's head would have rolled in the dust; in Naples, his bones only were well basted. As it was, the chastisement looked sufficiently frightful, or the officer reiterated his blows with the most cruel severity. How even Neapolitan flesh and blood could stand all this, I know not; but the coachman and the party in the carriage appeared to take it with the calmness of stoics, while the soldier, like Vesuvius, warming as he gave his eruption vent, continued to belabour the poor wretch with his naked blade!

What seemed by far the most curious part of the scene, was the perfect tranquillity with which all the people in the streets looked on during this exhibition of military violence. The officer was quite alone, that is, unaccompanied by other soldiers; while the street was thronged with persons of all ranks, yet not a single hand was raised to stop this outrage, not a word uttered expressive of disapprobation; nor was there even a look of surprise, or sympathy, or indignation, so far as I could see, interchanged among the spectators. I confess, I felt at first a little ashamed of myself, for sitting so quietly; but as soon as I saw that the populace, whose proper business it was to have pulled the ruffian from his horse, and drubbed him soundly, did not care, or appeared not to care, one straw about the matter, I contented myself with remarking, in language of which, had it been interpreted, they would no more have understood the spirit than, as it was, they did the words,—

“If, good people, you submit patiently to such things, you well deserve to be so thumped. But I wish you could see what would take place in similar circumstances in certain countries that I wot of!”

In the midst of the extraordinary bustle of unrestrained gaiety, which even incidents such as the above scarcely checked for a moment, the bier with the body

of the general officer so recently deceased came past. On all previous occasions on which, in different countries, I had seen bodies thus exposed, there was something in the appearances to shock the feelings, something ghastly or hospital-like. In Naples they manage such things better, for the defunct hero was probably fully as presentable when laid out on the top of his own coffin, as ever he could have been in his best days, poor man! He was dressed in full uniform, and the only apparent difference between his life and his death was, that his gay cocked-hat, with lace on it a hand's breadth wide, lay across his feet, in place of being planted on his head. He was nicely shaved, and his hair powdered, so that he lay "like a warrior taking his rest;" while the muffled drums and mute march of the well-drilled troops accorded with the rest of the military part of the scene, as if they had been afraid of awaking their departed commander. But on the giddy crowd of Naples the venerable appearance of the dead general produced no other visible effect than making them, as the crucifix in front of the body passed by, take off their hats, which they instantly pitched on again, and leaping on the nearest steps, or climbing the railings before the doors, grinned with renewed merriment, and sought, by elbowing their neighbours, to gain a better view of the calm face of the old soldier, who, most assuredly, was not buried alive,—for had a spark of life remained in his body, this tremendous hullabaloo must have roused him!

As soon as the funeral was over, we drove to Puzzoli to revisit the temple of Jupiter Serapis, which is perhaps one of the most curious objects near Naples, chiefly from the part which it has been made of late years to perform in a chain of geological evidence of the highest importance in that science. It seems to be now settled, almost to demonstration,* that the floor of this temple was at one time sunk at least twenty-three

* Lyell's *Principles of Geology*, 6th Edition, vol. ii. p. 393.

feet below the level of the sea, so that the waves washed up the sides of the columns to that height. This fact is clearly made out by their being bored round at a particular level by a well-known marine animal, which loves to prey in this manner upon limestone. The lower parts of the columns, however, not being thus perforated, it is obvious that they were sunk considerably below the surface, and were probably covered up with sand and gravel, or tuffa. The present position of the sea-worn and perforated portions of the three columns which are still standing, is about twenty-three feet above the level of the high-water mark of the sea, indicating, beyond all doubt, that the ground upon which they were originally placed must have undergone two distinct vertical movements, by one of which the columns were sunk till their bases being submerged twenty-three feet, the parts we now discover to be worn would be brought within the sphere of action both of the waves and of the lythodomi; while their lower parts would be protected by the strata of tuffa, or volcanic ashes. These parts again above the water, would of course be exposed to the action of the wind and rain, but to no other. For the curious and valuable geological reasonings furnished by these facts, and others observed in the adjacent districts, I may refer to Lyell's Principles of Geology, 6th Edition, 1840, vol. ii. pp. 384 to 401. At page 398 reference is made to a memoir published in 1838 by Nicolini, proving incontestably that the temple is going slowly down again, at the rate of about one inch in four years, a fact quite in accordance with the rest of the history of this ruin, which, as affording a scale or gauge by which the rising and falling of the solid land may be measured, is perhaps the most valuable of all the remains of antiquity.

Mr. Lyell's summary of this matter is as follows:—
 "From this fact, and from other analogous proofs derived chiefly from the architectural investigations of Nicolini, we may infer that the soil forming the foundation of the Temple of Serapis, has, in the course of the

last nineteen centuries; undergone the following oscillations:—1st, About eighty years before the Christian era, when the ancient mosaic pavement was constructed—it was about twelve feet *above* its actual level, or that at which it stood in 1838.—2dly, Towards the close of the first century after Christ, it was only six feet above its actual level.—3dly, By the end of the fourth century it had nearly subsided to its present level. 4thly, In the middle ages, and before the eruption of Monte Nuova, it was about nineteen feet *below* its present level.—Lastly, At the beginning of the present century it was about two feet above the level at which it now stands in 1838.”*

All these facts, and many others of the same nature, now indisputably established, tend to show that the country about Naples is in such a constant state of geological oscillation as to furnish the idea of its being a mere crust of earth floating on a mass of melted lava, which, like the sea, is subject to elevations and depressions. This notion, and some others connected with these matters, induced me to institute a long series of experiments, having for their object to ascertain whether or not the columns of the temple of Jupiter Serapis at Puzzuoli, were in that upright position in which it is to be supposed they were originally placed. It is no doubt true that the columns of some of the Grecian temples of the best times of their architecture, such for instance as those of the Parthenon at Athens, are slightly inclined inwards: but I do not believe that this has been found to be the case in any temples of the description of that at Puzzuoli. It happens, moreover, that these columns slope outwards, and not inwards, as they do in the temples alluded to in Greece.

As it would be difficult to render these experiments intelligible, without entering into long details, illustrated by drawings, it will probably suffice to mention that I found all the three columns to incline over, towards the

* Lyell's Principles of Geology, 6th Edition (1840,) vol. ii. p. 399.

south-west, or thereabouts. I may give one experiment by which this fact seems to be established. When the upper end of a plumb-line was applied to the smooth part of the top of one of the columns on its south-west side, the lower end or plummet fell nearly two inches clear of the smooth part of the column at the bottom; but when the same plumb-line was carried round to the opposite, or north-eastern side, and its lower end made just to touch the smooth part of the column at the bottom, the upper end of this vertical line extended about nine inches clear of the smooth part of the top of the column.

The centre one of the three columns slopes rather more than the other two. The most western column is so much weathered that it is not possible to take very exact measurements of its inclination, but it certainly slopes over in the same direction as the other two. A fourth column, which was the most western of all, has been thrown down, and now lies broken in three pieces, scattered in a direction about E.N.E. from the pedestal on which it stood. The weather-worn and worm-eaten parts of this prostrate column correspond exactly in position to the similarly worn parts in those still standing, thus proving that it has been thrown down at some period subsequent to that when the temple was immersed in the sea.

The direction in which the columns are ranged is very nearly S.E. by S. and N.W. by N. true bearing, and each pillar consists of a single stone, a circumstance to which my brother, Mr. James Hall, first called the public attention, and this, as Mr. Lyell says, is important, as helping to explain why they were not shaken down by these repeated movements. The weathering to which they have been exposed during sixteen or seventeen centuries, has laid bare the stone from top to bottom in a manner well worthy of notice. I found, when making a very careful drawing of them with the camera lucida, that the stratification of the marble in the western column faces the N.E., that is to say, the

beds of which it is composed lie nearly in the direction of the line in which the columns are ranged. The strata in the middle column lie in beds directed to the S.S.E. and N.N.W. Those in the eastern one have a direction about S.W. and N.E., that is, nearly at right angles to the direction of the line of the columns. The following careful measurements of the height of the columns may perhaps save some trouble to persons wishing either to repeat the experiments above-mentioned, or to make others, of which the height may be an element.

The length of the solid shaft of the columns I found to be 38 English feet $4\frac{1}{2}$ inches; the height of the round part, or torus, as it is technically called, of the base, 1 foot 3 inches, and that of the plinth, or flat, square part of the base, 8 inches—in all 40 feet $3\frac{1}{2}$ inches. My late friend Sir William Gell told me, that the capitals of such columns would probably be about 5 feet in height.

From Puzzuoli we strolled on to Solfaterra, which has the appearance of being the crater of an ancient volcano, and indeed still emits sulphur fumes in sufficient quantity to justify the name it has received from all time. King Murat, who gets credit for having set a-going almost every thing, good or bad, that is now doing at or near Naples, established some extensive sulphur works in the centre of this crater, (having no doubt a gunpowder object in view,) and the situation, it must be owned, is well chosen. We took a look into these works, and were half suffocated for our curiosity. It appears that the earth, which is strongly impregnated with brimstone, placed in pots is exposed to a heat considerable enough to melt the material they are in quest of, which separates itself from the earthy particles, runs together or secretes, and then finds its way through a hole in the bottom into a conical sort of tub, in which it is allowed to cool till it becomes the sulphur of commerce.

Near the middle of this old crater, the bottom of

which I should mention is horizontal, and generally speaking smooth, the guide took up a large stone, and, by letting it fall, produced not only a tremulous motion, but a sound which gives much the idea of the space beneath being hollow, as if the crater had at one period been filled up to its present level with melted lava, and that the top part having become hard by exposure to the air, the remainder had been drawn away by some other channel. According to this theory, the present flooring of the Solfaterra crater may be compared to the surface of a pond which, having been converted into ice, had been left in its place, while the water beneath had been drained off.

Murat, we are told, being desirous of ascertaining how far the above speculation was correct, ordered a well to be sunk through the rock; but, after going to the depth of more than a hundred feet, no hollow space was found. It is added that the work was discontinued in consequence of the ground becoming so hot that the workmen could not remain in the pit; while our guide, who was a stout Neapolitan tory, and a violent antigallican, alleged that his Majesty King Joachim was only searching for hell before his time!

However this be, it reminded me of an anecdote I had heard only the day before from an English gentleman who took his passage from Sorrento in the Naples boat, in company with two mendicant friars, who made no appeal to his charity till they came nearly to the city, when one of them displayed his little tin box, with a slit in the top, and earnestly begged the foreigner to contribute something towards the relief of certain poor souls in purgatory.

"Not I," quoth the stranger; "for you know, my good father, that we English have nothing to do with purgatory."

"Right!" cried the friar, nettled at the sarcasm, "you go straight to the devil without any stop."

"Not so! not so!" exclaimed the other priest, catch-

ing hold of the box and rattling it vehemently, "the charitable English go straight into Paradise."

While we were still laughing at this story, the guide changed the current of our thoughts by pointing out the very spot where, it is believed, and I do not see why the locality should be doubted, that St. Paul landed at Puzzuoli, or, as it was anciently called, Puteoli, on his way, in chains, to Rome.*

Near this spot of sacred history we were shown an amphitheatre which exhibited a very pleasing variety. In consequence of the interior being filled up with volcanic ashes, it had become, in the lapse of centuries, a fertile soil, and was thickly covered over with myrtles, arbutus, and other weeds of the climate familiar to English eyes chiefly as plants of the green-house. We then took a look at the ruins of a temple said to be dedicated to Neptune, I suppose on good authority, but consisting merely of enormously thick walls of brick and mortar wandering at large over a considerable extent of vineyard ground. This temple, if temple it has ever been, overhangs the low flat ground called the Starza, which Mr. Lyell supposes with so much reason to have been raised up from the bottom of the sea in the year 1538, when Monte Nuovo was formed.† Finally, our merciless guide led us to what he pronounced very positively to be the ruins of Cicero's villa, which consist of two almost obliterated small arches, and here and there a morsel of old brick and mortar, so that, take it for all in all, I think I never saw any where so weighty an hypothesis suspended by so small a thread of evidence. It may have been Cicero's habitation—why not? The situation is just such as a man of his taste would have chosen. But I ask, where is the villa? The guide calls my attention to an amphitheatre or a temple, and I admit they are so, because I see the forms and recognise some of the attributes of such places, viz.—rows of seats

* Acts xxviii. 13.

† Lyell's Principles of Geology, 6th Edition, vol. ii. p. 397.

or ranges of broken columns, but as I have already said in describing my first visit, I really had not faith enough to believe that three or four cart-loads of rubbish are entitled to the honour of being called Cicero's villa. The tradition-mongers, however, who stick at nothing, describe the orator as having (like Sir Humphrey Davy on the banks of the Lake of Geneva) fished out of his parlour-window! Still this established belief carries with it great interest as corroborating the supposition that the ground in that quarter has been raised by the volcanic forces which we know, from other observations, to be in action in that quarter.

"Writing in 1580," says Mr. Lyell, "Loffredo declares that, fifty years previously, the sea washed the base of the hills which rise from the flat land before alluded to; and at that time," he expressly tells us, "a person *might have fished* from the site of those ruins which are now called the Stadium."* And yet, the whole of the low space which lies at the foot of these cliffs is now dry land considerably above the level of the sea!

The difficulty, however, of pursuing geological, or any other out-of-door researches, is so great in the summer at Naples, that I felt compelled to cut short most of them on account of the heat. As I never was there in winter, I cannot speak of its climate then; but in summer the heat, though occasionally moderate and agreeable upon the whole, does melt away the hours at a sad rate. The day, no doubt, still consists of twenty-four of those artificial grains in the great sand-glass of Time, but only a very few of them can be rendered available in July for the purposes of energetic work, either of body or mind. In the middle of the day it is impossible to stir out, so that from about nine in the morning till four or five in the afternoon, you are a prisoner. Even after five o'clock, when the sea breeze has died away, and before the land wind has sprung up, the air is so close and sultry that the season is almost as bad for locomotion.

* Lyell's Principles, 6th Edition, vol. ii. p. 396.

tion as the highest noon is. Indeed, but for the fierce, right-down beating of the sun's rays, the middle of the day would not be so trying as the evening hours from four till eight may often become from the absence of any moving currents of air. It is true that the absence of the sun enables you to throw open the carriage, and as the evening falls, the twilight is very often agreeable. At that season, too, as all the Neapolitan world appear gaily dressed in the wide streets, I cannot remember to have seen a merrier, if not a busier, scene than the grand street called the Toledo presents for about one hour before, and many hours after sunset.

We English, however, who pique ourselves upon our liberty, refinement, intelligence, and so forth, have little or no toleration for any thing else. We cannot understand how any people can be moral without protestantism, or rationally happy without the march of intellect, or well fed without political economy, or well clad, unless their minds and bodies are drilled by mechanic institutes. Merely because we witness a great deal of idleness and dirt in the streets of Naples, we set down the whole nation as idle and dirty. Possibly we do them no injustice by such judgment, but we really do not and cannot know whether it be so or not. Transient observers naturally, and indeed inevitably, judge hastily of every thing, and by bringing all they see before them to the admeasurement of a scale meant for totally different circumstances, may often err as grievously as the king of Johanna in the straits of Madagascar. This worthy jet-black monarch, who received us with a tin crown on his woolly head, and an old cutlass strapped round his half-naked body, wished to reckon his time by a sun-dial he had obtained from some English ship, in exchange for cocoa-nuts and oranges. As the latitude, however, of his sable majesty's mud palace was between 10° and 12° south, while the "style" of his dial was adjusted to $51\frac{1}{2}^{\circ}$ north, or the latitude of London, the mistakes in the regulation of the royal time at Johanna were not small.

In like manner, I suspect, most of us are apt, insensibly perhaps, to alter the angles of our national "styles" to suit, not so much the latitude we have come to, as that in which the notions in our head have been matured. This sort of prejudice, has, no doubt, a good effect when applied to the regulation of our own conduct; but it often misleads us in estimating that of the people of other countries.

Some people form their opinion of Naples by what they meet with in the king's palaces, or those of the nobles; others by what they see or read of the Toledo; some by the singular scenes which occur at the Mole and along the Chiaja; but I do not remember that any one has specifically mentioned Santa Lucia, a district which to my eye at least is fully as characteristic as any of the above-mentioned places, and quite as worthy of being shown to a stranger whose time might be so short that he wished to see Naples at a glance, and in her undress.

Santa Lucia forms one of the widest parts of that long and winding course of streets which fringes the north side of the great bay, and behind which rises, rather abruptly, the city of Naples, in a series of terraces, or rows of houses one above another, with a degree of beauty far better known, I guess to the readers of landscape annuals than it is to those who, allured by the dazzling pretensions of the exterior, risk the destruction of their associations by bringing them in contact with the reality. It is of a crescent shape, concave towards the bay, and including in the scope of its view not only Vesuvius proper, but Monte Somma, which girds its top like a battlement, the distant ranges of hills to the north-east and south-east, and many of the softer features of the landscape, such as Portici, Resina, and Torre del Greco, hanging on the breast of the black, treacherous volcano, "like rich jewels in an Ethiop's ear." In the middle of the view from Santa Lucia we have Castellamarè, Vico, and Sorrento, guarded by Mont St. Angelo, overtopping even Vesuvius, and ex-

tending itself into a long line of graceful ridges, forming the skyline on the south side of the bay. On the right lies, in the distance, the showy island of Capri, which, however, is nearly hid behind a huge military bake-house, a most unsightly object, balancing at the western horn of the crescent an immense trattoria or tavern at the other end, where long verandahs and shady walks tempt the lieges to dine or eat ice in the open air. On the water, within the compass of this crescent, lie fishing-skiffs innumerable, and pleasure-boats for those who choose to row about.

In summer a considerable portion of the area is occupied by temporary bathing-houses, built far into the sea, but connected with the shore by long galleries. The Neapolitans are rather a curious people about bathing, for they submit to the police regulation which forbids them to go into the water before the 1st of July, and they comply quietly with the regulation which requires them to leave off bathing in the beginning of August, for I saw them busily employed in removing the planks of the bathing sheds, on the 3d of that month—the very best in the year—solely because two hard showers of rain had fallen, accompanied by thunder! I tried in vain to discover what possible connexion there could be between the wholesomeness of sea-bathing and the effects of thunder and lightning, but I could make out nothing more than their belief—or the belief of their dictators the police, that the rain by cooling the sea water rendered it unfit for the tender persons of the multitudes who crowd eagerly to the shore, and evince by their numbers the anxiety with which they seek to enjoy the brief season allowed them for bathing by their officious rulers.

But the grand characteristic bustle of Santa Lucia is on land, and unhappy is the poor wight who takes a lodging in that noisy neighbourhood. When we came from Rome in the end of April, we lived, and very nearly died (of noise) there, and I verily believe that the misery we suffered in the execrable hole of a lodging

was the main cause of our taking ship, and running off to Sicily and Malta. Had we gone straight to the Crocelle, one of the best hotels in Europe, we might have found Naples such a pleasant place that the proverbial discomforts of Sicily might have proved an overmatch for our curiosity. Still, the extraordinary racket of Santa Lucia, unpleasant though it may be for an invalid, or even to a strong person, to live near, is so very amusing to witness in passing along, that I have often loitered an hour at a time to observe the strange confusion, as it appears to be, though, possibly, it is all in good order at bottom. The noise is caused partly by the incessant bawling of the people, who wish the passers-by to stop at their stalls and tables, and partly by the rattling of carriages and carts, and all sorts of wheeled conveyances dashing over the rough pavement at a furious rate—the drivers cracking their whips and screaming out to the careless foot-passengers. They, in their turn, with a recklessness quite singular, lounge about in crowds, directly in the carriage way, and barely edge on one side when the wheels are thundering all but over them.

Every group, indeed, appears as much absorbed in its own particular topic as if the fate of the nation hung on its being loudly discussed, so that the furious driving of the carriages at Naples, where the pace is generally a gallop, makes no impression on the people in the streets. In order to meet the unusual passion for locomotion, two or three stands of carriages are stationed in different parts of Santa Lucia, each one being accompanied by a cad, or "ragazzo," whose business is to aid and assist the coachman in proclaiming to all the world the merits of his vehicle, and in interrupting and teasing passengers. But these loud and almost angry vociferations are nothing to the vehement entreaties of the macaroni sellers, the fishmongers, the venders of snow-water and iced lemonade, the bakers, the dealers in garlic and sausages, and numberless others whose notes of entreaty swell the gale, in company with odours sa-

voury in the highest degree to the taste of a sharp-set, light-hearted Neapolitan mob.

To meet this taste, the whole of the low sea-wall, which forms the outer limit of the street, is lined with tables of various dimensions, placed in booths having a sort of sail or awning, rather tastefully suspended from the ends of light poles, erected in the south and west sides to keep off the sun from the shell-fish, fruit, and vegetables, ranged beneath. Of these booths there may be about three or four dozen, each furnished with chairs and benches in front and at the sides, where in the evening party after party may be observed to select a table and sit down to supper, either in the lamp-light or in the moon-light, which I observed was always the gayest season. To live in the open air seems their passion, and they greatly enjoy the additional brilliancy which the full moon gives to their merry doings. To a stranger the whole scene has so much the air of some grand occasional festival, that he can scarcely believe it to be one perennial round of gaiety.

On the opposite side of the street, namely that next the houses, especially in those places where it is widest, or which command the best views of Vesuvius and of the sea, a higher style of entertainment is furnished, under large ornamental awnings, spread out horizontally, from the walls of the houses, festooned at the margin, and between each loop a lamp; the effect of which arrangement of drapery and lights is uncommonly pretty. Under these fly-tents large tables are spread with all kinds of tempting preparations, inviting the passengers to try the contents of many steaming pots and pans, ranged close at hand, under the charge of portly "chefs," or cooks, rigged in clean aprons, and snow-white night-caps shining in the lamp-light, all contributing to give an appearance of the raciest good cheer, served with the utmost perfection of cookery, enough to make one hungry at the very thoughts of such luxury.

When half a hundred parties, from a dozen to twenty in each, are all indulging in the highest excesses of

good-humour, and feasting to their heart's content, some under these showy awnings; some in the open air, which many prefer, and in a fine moonlight night; nothing I have seen elsewhere can be compared to the gaiety. If in addition to all this excitement it happens, as it did on four successive nights when we were at Naples, that an eruption of Vesuvius is going on,—in which the people always take the keenest interest, and that, besides the companies above described, there are assembled to witness the eruption from this favourite point of view many hundreds, I might say thousands, of other persons from all parts of the town, of all ranks and all ages, either seated on chairs along the shore, or soattered in groups in the terraces adjacent, or rambling up and down the streets, as if it were one grand rout or evening party, Santa Lucia presents one of the most truly fairy-land-like scenes in the world.

There is another grand source of attraction to the Neapolitans in St. Lucia, besides its baths, its suppers, and its views of the Volcano and the Bay,—I mean the water of a celebrated mineral spring, which gushes from the ground near the base of the sea-wall at some little distance from the centre of the crescent, towards the western end or horn. In the midst of a despotism, here is to be witnessed liberty and equality of enjoyment in the fullest sense of these much abused words. Never before did I see any thing comparable to the intense relish with which all classes of the community imbibe oceans of this odious water, which smells as like rotten eggs as can be, but tastes, I was told, like brisk champagne. Wealthy and healthy, as well as invalid water-drinkers of both sexes, come in such numbers in their carriages, that the street is often almost blocked up with handsome equipages. The water is handed up in huge tumblers, by lines of women, each glass holding more than a pint. I observed that not only ladies and gentlemen in their carriages, and their children, but the coachman on the box, and the footmen in the dickey, all took

their swill, apparently, with equal relish, which is the most inconceivable thing in the whole history of tipping!

When I first saw the crush of carriages, and the bustle among the persons drinking the water, and still more among those who handed up the full tumblers and passed back the empty ones, I thought it a miracle how they were not all smashed to pieces. But when at length I succeeded in making my way down to the fountain itself, the scene far outdid any thing above stairs; and such a jostling of ranks I suppose is not to be found any where else on the globe. With the exception of the highest ranks, and the lowest, every intermediate class appears to have its representative at this great Congress of Teetotalers. Of bishops I did not see any, but priests and deacons, and an endless genealogy of friars of all orders were there; soldiers, from the colonel to the corporal, tradesmen, fishermen, barbers and barbers' clerks, dandies in the pink of high dress, and ragazzos with not a square foot of drapery to hide the classical symmetry of their naked limbs. Mixed up with this strange jumble of water-drinkers were to be seen numberless water-carriers, chiefly busy damsels, bearing off tumblers of the much-coveted fluid to the impatient carriagefuls in the street above. I observed that these women carried a couple of tumblers in each hand, the thumb being thrust into one glass, the fore-finger into the other, by which arrangement the crystal was preserved, whatever effect might be produced in the beverage. Besides these present-use suppliers, rows of male porters contrived to thread their way, some carrying off baskets of bottles filled with the precious drink, others balancing jars of it on their heads, and some trundling it off in barrels!

It seemed quite wonderful that so few spouts could supply such endless drains upon them, and still more wonderful how the over-wrought drawers of water adjacent to the source escaped demolition in the press, or how all the glass and crockery at this grand focus of

attraction and collision was not shivered to bits. I need scarcely add that the noise near the spouts was prodigious, drowning that of the surf below, or of the street above. The only persons in the crowd who were not bawling and squalling, pushing and squeezing, were those happy folks who, having succeeded in their object and obtained a measure of the nectar of Santa Lucia, retired with their brimming glasses, to the circumference of the ring. There they stood, panting from the exertion, in most amusing contrast with the raging crowd within, mopping their brows, and gulping down the water very much after the fashion of thirsty post-horses after a twelve-mile stage on a dusty day at mid-summer!

CHAPTER XIV.

SMOLLET'S TOMB AT LEGHORN—SALT MONOPOLY IN TUSCANY.

AFTER the first week in August, the heat became so excessive that, although the local interest had become even greater than before, we got our travelling steam up, and bade adieu to Naples. Mount Vesuvius had been in almost constant eruption for many days, literally flooding the sides of the mountain with broad lava streams, carrying destruction wherever they went, and spreading terror into the hearts of the inhabitants of all the towns lying at the foot of the volcano. But as no verbal description can afford a just conception of their magnificence, I shall say nothing of them.

In the intervals between several highly exciting expeditions to these scenes, we took occasion to revisit both Herculaneum and Pompeii, where we saw melancholy proofs in abundance of what all these fiery commotions were inevitably leading to. In the eruptions now going on in our own day, we witness vineyards and houses swallowed up in the red hot lava—which, though next to the earthquake it is the most destructive, most violent, and irresistible variety of volcanic action, is fortunately seldom so sudden as to include the inhabitants in the catastrophe. It is different with those gentle showers of fine-ashes which appear to have settled down like snow on Pompeii, where there appears to have been much more destruction of human life. At Herculaneum a third variety occurs, where a stream of volcanic mud, composed of hot water and ashes, has filled up the streets, submerged the houses, and choked many of the inhabitants by a sudden inundation.

The contemplation of these "sundry kinds of death" is not un instructive, while the novelty of the scenes endures: but nothing is more remarkable than the rapidity with which the mind accommodates itself to circumstances, and after a little while views, almost with indifference, objects which at first appeared to possess a salutary impression, calculated to last for ever. Accordingly, we found, after a week or ten days of eruptions, and several visits to the disinterred towns alluded to, that we had quite enough of such excitements, and therefore without more ado we resolved to shift the scene altogether.

Our first place of call was Leghorn, the great maritime outlet of Tuscany, or, as it may be called, the Port of Florence. The grand duke nearly at the time of our visit had declared Leghorn a free port, a measure which gave instantaneous vigour to the commercial enterprise of his country. The contrast between the climates of Naples and Leghorn we found to be considerable; but it was not so great as that between the appearance of activity and wealth of the Tuscan city and the Neapolitan. At Naples there is certainly bustle and noise enough for half-a-dozen towns, but it is rather the stimulus of pleasure than the stir of genuine labour. At Leghorn all is life and energy; the quays are lined with large ships of every nation; the harbour covered with boats carrying goods to and from them, or passing up and down the canals leading through the streets to the well-filled warehouses, long and lofty lines of which meet the eye every where—as well as ranges of new-buildings of all sorts, indicating the progressive and prospective wealth of the inhabitants, among whom prevail mutual confidence and wholesome credit, as well as a feeling of security in the good faith of the government.

The nature of the measures established about that time, had for their object to render Leghorn a free port, in the usual sense of the term—such that goods from every part of the globe, and in every description of ves-

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sel, and under every flag, might be landed and stored, without the payment of any duty, until sold for distribution over the markets of the interior—or, if not so disposed of, the goods might be re-embarked at the pleasure of the merchants, without any charge, save the expenses of transport and warehouse-room.

The advantages of such a system to any country pursuing it, are found to be so considerable, that it seems curious every nation does not adopt it. This true freedom of commercial action I have heard spoken of at Leghorn by the merchants with great delight, for it enabled them to do what they pleased, or what they found most profitable, with their goods. They might import a cargo with the hope of selling it well, but, on not finding an advantageous market on the spot, they could try another without loss. The consequence of this was, that large quantities of all kinds of merchandise found their way there for the chance of sale; and, being on the spot, often did cause that very demand which had not previously existed.

Of course goods are not allowed—by law at least—to pass out of Leghorn into the country without the payment of a moderate duty to government. The determination of this point must be the nicest and most difficult of the whole arrangement. For if the duty be too high, the smuggler—that great equalizer and modifier of all such matters—will soon bring it down in effect, if not in the Tariff. There was much talk at Leghorn when I was there of barriers and motes to prevent such proceedings—but if “Love laughs at locksmiths”—the “Smuggler laughs at sentries!” Even if these extreme measures be not resorted to, the mere fact of the greatest port in the country being well filled with such goods as the people of the interior wish to possess, must have the effect not merely of stimulating the demand, but eventually of lowering their price, and assisting their circulation, especially as the port in question is admirably situated for this purpose, with reference to the whole of the middle portion of Italy.

I have mentioned that we found the climate of Leghorn somewhat different from that of Naples, which was, indeed, to be expected, considering that it lies three degrees farther to the north. It is also an open town, lying on a straight coast, with low land stretching behind it, so that the winds both from the land and the sea blow readily through all its streets. Naples, on the contrary, lies at the bottom of a deep-bay, is walled in by steep mountains close behind it, which pen up the wind and prevent their ventilating its narrow and crowded thoroughfares. Mrs. Starke suggests that the subterranean heat of the volcanic fires may be one cause of the heat of Naples and the towns lying round the Bay; but, without seeking for so deep-seated a cause, we may safely admit that Naples is well entitled to be considered a hotter place than Leghorn. The voyage from one port to the other, in 1834, was generally made in a couple of days, but I have no doubt that since then the passage has been shortened by the intermediate improvements in steam navigation. We made it in a little less than forty hours, including a detention of four hours and twenty minutes at Civita Vecchia, the distance being rather short of three hundred English statute miles, which is about seven miles and a half an hour for the time actually under weigh.

We drove one evening to the English burying-ground, which then lay on the outskirts of Leghorn, though, from what we saw of the projected improvements consequent upon the freedom of the port, I dare say that the few years which have elapsed since our visit have brought it within its limits. It is a very pretty place in its way, neatly enclosed, and nearly filled with handsome, white marble monuments, of every conceivable form of sepulchral architecture. An unusual number of weeping willows, drooping their heads over the tomb-stones, and of light, low, wattled fences round many of them, covered with creepers and flowers, give a peculiar character to this exotic cemetery. In walking through it, one is made melancholy by reading the names of so many

young victims to consumption, who have been sent to Italy only to die; probably long after all chance of amendment must have been gone. In such hopeless cases it is often difficult to decide what is best to be done; but from what I have seen I should scarcely advise the friends of a delicate invalid to travel in Italy. Even a person in strong health is sure to encounter multifarious annoyances, which, though he manages to laugh at, and tries to make light of, must be almost intolerable to a worn-out frame, and more than proportionably depressed state of spirits. The naked floors of brick, or even of marble; the damp and not always clean beds; the sour bread; the oily cookery; the slut-tish attendance; the musquitoes, fleas, &c., together with the total want of many small, and some great comforts, which in England have become necessities of life, render Italy, or indeed almost any part of the continent, very little suitable for a poor, broken down, attenuated English invalid. I should certainly greatly prefer taking any person I was interested in, *and who had not been allowed to go on too long breathing an air unsuited to their constitutions*, to Madeira, where the climate is admirable, and the circumstances are such that a choice of temperature may be made from ninety degrees of the thermometer to the freezing point.*

What interested me most in the burying-ground at Leghorn was the tomb of a brother sailor, Smollet, though I was rather provoked to find it scribbled all over with the signatures and trashy remarks of innumerable tourists, who seemed to imagine that by hooking on their own unknown names and insignificant compositions, both in prose and verse, to the shrine of the poet, they too, might have a chance of some touch of distinction.

* On this subject Sir James Clarke's book on Climate may be consulted with advantage; and I am glad to see the announcement of another publication, which cannot fail to prove highly useful, entitled *Maderia*, illustrated by Mr. Picken, published by Messrs. Day and Haghe. Also a useful little work, Mr. W. White Cooper's "*Invalids Guide to Madeira*," &c. Smith Elder & Co, 1840.

As it did not strike me at first that this disfiguration of a great author's monument is really one of the best compliments that can be paid to his renown, I turned to the sexton, and in the impulse of the moment promised him a few pauls if he would clear away all these impertinent additions. Before we left the ground he had got a bucket of water and a bit of marble with which he had effectually restored the stone to its original brightness. Till then it did not occur to me that I had missed the true point, and by thus assimilating Smollet's tomb to those around it had in fact lessened the only distinction which such things are capable of conferring on the memory of the dead.

As we were strolling home from the burial-ground we fell in with an English gentleman, who carried us to his country seat, and gave us tea in a cool alcove, such as one reads about, but seldom sees. I was speaking in great praise of the recent enactments which made Leghorn a free port, and expressing no doubt that all the other commercial arrangements of so liberal a government were of the same character.

"Not exactly so," he remarked rather drily, smiling at the same time, "for they appropriate to themselves the exclusive sale of salt and tobacco; no monopoly can be more rigid."

"There is nothing very new in that," I said. "It belongs to Spain and Germany, and, for that matter, in part to England, for we will not allow tobacco to be grown in the country."

"Oh no!" he replied, "I did not say there was any thing new. I merely smiled when I thought of the rigorous manner in which the monopoly is enforced here, and of the absurd results to which such severity leads. For example, not only are the ordinary steps taken to prevent the intrusion of competitors in the open market, but such is the dread of a rival manufacture, it is actually against law to draw a bucket of water from the sea! So that when my children were once directed to be washed in salt water, I was obliged to apply for

a regular permission from the Custom-house before my servant would venture to bring a couple of gallons from the shore!"

"One summer's day," he continued, "when my sons were bathing on a shallow part of the coast, they were surprised to observe a thin but extensive coating of salt on the surface of the sand, caused, no doubt, by the sun's rays having evaporated the water. The boys wondered that so valuable an article as they had been taught to consider salt should be left on the beach to melt in the rain, or to be washed back again into the surf. Thinking no evil, of course, they collected a towelful and brought it to me, who was as much surprised as the lads. But while we were standing round this newly-discovered treasure, and speculating on the strange fact of its being allowed to run to waste, one of the Italian servants who happened to be passing, saw the contents of the towel. Turning as white as the salt itself, he exclaimed,

"'In the name of the Virgin, how could you be so imprudent as to pick up salt from the sea-shore? Don't you know that you are subject to a heavy fine for infringing the laws of the country? Even now,' continued the greatly-alarmed domestic, 'it is my duty to give information to government, otherwise, if it becomes known, I shall be punished.'

"'What is to be done, then?' we called out, all laughing so outrageously as almost to drive the servant into the virtuous act of giving information.

"'The best thing to be done,' observed the sagacious Italian, looking timidly about him, 'as no body knows any thing about the matter but ourselves, is to bury the salt forthwith!'

"So off we all set to the garden, dug a hole, and consigned the dangerous property to the earth. As we were thus employed, one of the boys, who felt rather provoked and humiliated at this method of disposing of a good article which seemed to his home-bred fancy so fairly the property of any one who should take the trouble to pick it up, said,

“‘It is too bad that I should be prevented from picking up a few handfuls of salt from the shore, when I saw three or four fat friars filling their pouches with it from the same spot.’

“‘Ay, ay,’ cried the old servant, ‘that is true enough: but where in Tuscany, do you suppose, is there a custom-house officer who would dare to make a ‘visita’ to the pocket of a priest?’”

CHAPTER XV.

THE LEANING TOWER OF PISA—THE BATHS OF LUCCA—A
GAMING TABLE—RECENTLY DISCOVERED MANUSCRIPTS OF
TASSO.

WE set out next day, without regret, from Leghorn at half-past five, in a clear, cool, dewy morning, and traversed the same line of road over which we had passed on the 1st of November the year before. Every thing was very pleasing, but it must be owned, that in luxuriance of foliage, and in the size and arrangement of the vines especially, those of Tuscany are very shabby looking, compared to what we see near that great hot-bed, Naples, where they hang in the most gorgeous and poetical festoons that can possibly be imagined, from tree to tree, over acres of ground rendered classical by a thousand other associations.

On passing through Pisa we stopped an hour or two, in order that I might make a careful camera drawing of the celebrated leaning tower, which, in spite of what is called its monstrosity, has always been a great favourite of mine. My purpose, on this occasion, was to try to ascertain whether the tower had been originally built in an inclined position, or if the inclination had been subsequently given to it by the subsidence of the ground after it was completed.

I established, completely to my own satisfaction, that it had been built from top to bottom, originally, just as it now stands. My reasons for thinking so are, that the line of the tower, on that side towards which it leans, has not the same curvature as the line on the opposite, or what may be called the upper side. If the tower had

been built upright, and then been made to incline over, I conceive that the line of the wall on that side towards which the inclination was given, would be, more or less, concave in that direction, owing to the nodding, or "swagging over" of the top, by the simple action of gravity acting on a very tall mass of masonry, which is more or less elastic, when placed in a sloping position. But the contrary is the fact, for the line of wall on the side towards which the tower leans is decidedly more convex than the opposite side. I have, therefore, no doubt whatever, that the architect in raising his successive courses of stones gained, or stole a little, at each layer, so as to render his work less and less overhanging as he went up; and thus, without betraying what he was about, really gained stability.

In spite of what we had been told, we had great difficulty in getting a lodging at the baths of Lucca, and were bandied about from hotel to lodging-house, and lodging-house to hotel, till we began to fear that we should have to pass the night in open air, an adventure which, as we had now reached a far colder elevation than we had been accustomed to, would have been any thing but agreeable.

We had been driving during the whole day among mountain scenery very different from any with which our eyes had long been familiar. It had no resemblance to the volcanic districts about Naples, still less to those round Mount Etna, and altogether dissimilar to the burnt-up, naked cliffs of Malta. At the baths, and along the winding valleys up which we had to pass to them, all is green, from the highest tip of the highest hill right down to the bed of the brawling Serchio. No bold escarpments stick out with geological prominence to tell the history of remote epochs; all is smooth and verdant, however steep, or however high. And yet there is a considerable degree of wildness in the scenery, owing to the variety in the forms and elevations of the mountains, and to the unusually abrupt and tortuous bending in the great valleys as well as in the smaller ravines which intersect the country.

On the tops of several of the lower hills we saw a sort of castellated villages, and on the sides of many others very pretty hamlets peeping out from among woods of chestnuts and olives, which almost exclusively clothe the steep faces of the ridges, and form by all their very different shades of green a mixture by no means unpleasing.

But these differences in the physical aspect of things, on which I have only slightly touched, are trifling and unimportant, compared to the difference observable in the moral scenery of the people we were now among and those we had left behind us at Naples and Sicily. In the valleys at and near the baths of Lucca, we recognised something of the self-respect, and the virtues belonging to that sentiment, which characterize Switzerland. We met every where with civility, cleanliness, activity, and fair dealing. Those parts of the soil which are not too steep to be cultivated are turned to the best account. The houses are better built and better furnished than any we saw in Sicily, and the ground about them is trimmed up a little, as if the inhabitants did not consider their house as their hogsty—a mere receptacle for their bodies, when not employed in their fields. 'I remarked, particularly, that the children were also better dressed than those of the south; their hair clean and more tidily disposed, and their persons respectably scrubbed. Moreover, all the men, women, and children whom we saw were employed in some way or other; the men, generally speaking, in the fields; though we did see some women engaged in the lighter works of weeding and hoeing; but they were mostly engaged near their cottages beating hemp. The children, unlike the lazy, ragged, and dirty swarms of Naples, ran about, helping their parents to carry small loads. In short, all was bustle and business. The women too, were a very pretty race, erect in gait and classical in features—neat in their dress and pleasing in their manners; so that an air of contentment and plenty pervaded every thing in the little state of Lucca, which, whatever be the cause,

struck us as very remarkable on coming from the countries in the south of Italy.

Besides appearances, there was certainly something more substantial to engage our notice as compared to Naples; for instance, the prices of things were much lower; and, what was fully as important, the manner in which payments were received was vastly more agreeable to the payer, when contrasted with that which prevails in the kingdom of the Two Sicilies. There we never paid any money to high or low, rich or poor, without having the mortification of seeing either that it gave no satisfaction, or that something more was either expected as a right, or would be aimed at as a trick. At Lucca baths, on the contrary, the landlords, waiters, shopkeepers, and others with whom we had any dealings thanked us for our money, wished us heartily a good journey, and in every way showed that they were not merely satisfied, but grateful for our custom.

There are beggars there, no doubt, as every where else in the wide world—the poor we have always with us—but the difference between Lucca and Naples is, that at the baths there is something else—at Naples nothing. In one shape or another sooner or later, a stranger is made to feel that he is in the midst of a vast gang of robbers who, though they do not actually put a pistol to his head, or touch his breast with a stiletto, in order to force him to surrender his money, nevertheless show an equally resolute determination to get hold of his cash, in the still more disagreeable shape of a pretended right—or a bargain which is all along known by both parties to be a mere dishonest pretence for extortion. I often thought how advantageous it would be in Italy if one could make a contract both with the people and with the mosquitoes—to give the beggars, once for all, fifty or a hundred dollars, and to have done with them; and, in like manner, to turn over to the mosquitoes as many ounces of our best blood as they now suck out in drops, provided they would only agree

not to buzz about our ears for no earthly purpose but to rob us of our nights' rest !

On the evening after our arrival at the baths we went to the Casino, a public reunion held once a week for dancing and other purposes prevalent at watering-places. The young and gay Duke of Lucca, the sovereign of the the country, was there—and in fact it might be called his party, for his chamberlain received the company. We were introduced to the functionary by a Spanish lady of our acquaintance, and by him were formally presented to the duke, who however said nothing, and presently engaged himself busily with dancing.

In the course of the evening we were tempted, by the hope of a cooler climate, to stroll into a small apartment lying on one side of the ball-room ; and nothing can be conceived in more gloomy contrast with the brilliant and light-hearted scene hard by, than what we saw going on in this retired corner, where it was almost dark.

In the middle of a large table there stood a single light, partially illuminating the company, though it shone with great distinctness on numerous piles of money, both gold and silver. Fifteen or sixteen people who were seated round, watched with calm but intent anxiety the turn of the cards as they were slowly dealt by one of the high priests of this wicked worship—to which that of the golden calf of old was a harmless devotion. Indeed it has often occurred to me, that the great law-giver and historian of the early fortunes of the Jews, may have clothed under the allegorical form of the worship of a golden calf, one of the worst vices of the adorers of Mammon.

At all events I am sure no faith can be more sincere, or enthusiasm more fanatical, than the earnest zeal, and absorbing greediness, with which mere gold and silver are coveted by gamblers. In smuggling there is a dash of boldness and enterprise stimulated by the excitement of risk, which will by calling up courage and

conduct to meet its exigencies, beget more or less of a generous spirit even among outlaws. The same, though in a less manly degree, may be said of highway robbery, piracy, and house-breaking. But in sordid gambling there is nothing but a cold-blooded, calculating desire to get hold of so much cash—dross—on its own despicable, metallic account!

The most profound silence prevailed in the room—broken only by a few faint whispers, chiefly among the triple row of by-standers, most of whom were either engaged directly in the game, or took a material share in it through the agency of betting. The clink of coin and the rustle of bank-notes could also just be heard, as the interested parties stretched forward their hands and deposited their stakes on one or other of the numerous cards dealt with their faces upwards, on the table. As the card, which decided the fate of the stakes, was slowly pulled out, I could hear the escape of many a suppressed breath, and thought I could see on the countenances even of those who appeared to be the most practised, a slight flush of the cheek, or twitch about the mouth, or an involuntary glance of the eye, symptomatic of such deep-seated feelings that though their impulse shook the whole system, their indications barely reached the surface.

After looking at this for a little while, I chanced to alter my position by a couple of paces, which brought into my view a beautiful woman I had not seen before, in full dress, with cards in her hand, and a pyramid of money before her! She watched the turns of the wheel of fortune as intently as any of the men did, and with a look as little feminine as the veriest gamester among them. The scene in lord Byron's Corsair flashed on my recollection, in which upon a certain lady's brow

“ ——— unknown—forgot—
Her hurrying hand had left—'twas but a spot—
Its line was all he saw, and scarce withstood—
Oh slight but certain pledge of crime—'tis blood!

The care-mark which anxiety had distinctly traced on her forehead—though it was not written in blood, spoke quite as clearly of guilt, as if murder had been its origin ! The lady I have said was beautiful—but as I looked at her greedily fingering the gold with the clutch of a ruffian, and bethought me of her dishonoured home, and fancied I could hear the cry of a little voice or two from a far away deserted nursery, the expression of her countenance changed to that of a fiend !

• Next morning, while our heads were still full of the horrid scenes of the gambling-house, we were called away to enjoy a treat of a very different nature, and well calculated to dispel the gloom cast by that melancholy scene. At a neighbour's house we met Count Alberti, an Italian gentleman, who showed us some very interesting manuscripts of Tasso's which he had obtained from the library of the Falconieri family at Rome, in which they had lately been discovered. The interest of these documents is twofold, for they not only give us some new, and remarkably pretty small pieces of poetry of that author, but they throw the clearest light upon a part of his history, which has been a subject of doubt and very involved speculation ever since the poet's death. The cause of Tasso's imprisonment, first in a madhouse, and then in a jail, was generally supposed to have been his presuming to form an attachment for Leonora, the sister of Alfonso, duke of Ferrara, at whose court he had been received with distinction. But until this recent discovery I believe the fact, and certainly its details, were not positively known. It now appears from these manuscripts, which have been carefully preserved by the poet Guarini, into whose hands they fell, that Tasso was not only in love with the said lady Leonora, but, what is agreeable enough, he was beloved again.

Among the papers we have the originals of several autograph letters of his, most of them dated, I think, in 1572. Tasso, if I recollect rightly, was born in 1544, and died in 1595. There is also one very interesting letter addressed to the Duke of Ferrara, which is curious

from its having been the proximate cause of his imprisonment. In it he improvidently makes some allusion to his attachment, and the whole secret, of which this unfortunate letter gave the clew, was then let out by the treachery of a page who, happening to get hold of a book of Tasso's manuscript poetry, tore out the half of one of the leaves on which there was written, in his own hand, lines enough to convict him of the crime of love in a quarter to which the poet, then unknown to high fame, and merely the retained servant of the proud lord, ought not, it seems, to have cast his eyes. What is in the highest degree singular is, that one of these manuscripts is the actual half leaf which convicted the culprit, and it, as well as the above-mentioned letter, are docketed by the duke himself. He says that, "as Torquato seems to be mad, it is fit that he should be sent to an hospital to be duly purified."

So he was ordered to prison; but it appears that Leonora gained intelligence of the impending mischief, and wrote to advise Tasso to fly from the court. This affectionate letter reproaches her lover with his excessive want of ordinary discretion, and advises him to get away as fast as he can. Although he appears to have been the simplest creature on the face of the earth, and totally ignorant of the ways of a court, he had yet sense enough to take such a hint as this and fly. By this means he evaded Alfonso's anger for nearly two years, when he indiscreetly returned, being impelled by motives which are abundantly obvious in this correspondence.

There occur in this collection numerous characteristic traits of all the parties concerned in these intrigues—very trivial in themselves, but which the renown of Tasso invests with a high degree of importance. One day Tasso having, it would seem, been struck with some piece of embroidery done by Leonora's sister, she made him a present of it, and he, as in poetical duty bound, wrote her a copy of verses on the occasion, the original of which, in his hand-writing, forms one of Count Alberti's papers. Leonora, on reading them, felt,

or affected to feel, a little jealous of this transaction, and playfully scolded the poet for his defective allegiance. Upon this he indites a sonnet beseeching her to embroider for him the cover of a book which she was then reading. She of course complies, and we saw the letter accompanying the gift, as well as the gift itself, which bears on one of its blank pages an inscription in Tasso's own hand-writing, declaring that he would never part with it till his latest breath. The book is Boccaccio's *Essay or Treatise on Woman*, which I am told (for I never saw it except on this occasion) is a sharp satire on the sex. In Leonora's note accompanying the present, she alludes to the subject of the book in very lively terms, calling her own conduct truly *Evangelical*, inasmuch as by treating him in this way, she obeys the gospel precept of returning good for evil. The book is a pocket volume, very neatly embroidered on the outside. Within, on the first blank page, there is a sonnet in Tasso's writing in praise of the lady and her workmanship, which he declares, far beats that of the spider which, seeing it, is struck dumb. "Nevertheless," he goes on to say, "the web of love, which is thrown over his heart, though still finer than either, is quite strong enough to bind him for ever."

Count Alberti showed us Tasso's copy of Virgil, of which the margins are filled with annotations in his hand-writing. One passage was pointed out in which Virgil indulges in some reflections upon courts and courtiers. This has given occasion to Tasso, to add a note of great asperity against princes. There is also a well-thumbed and scribbled-over copy of Polybius, and another of Livy on some military matters, which it is probable Tasso had studied closely that he might acquire a knowledge of battles and sieges while composing his *Jerusalem Delivered*.

It naturally strikes every one with surprise how it should have happened that so many letters addressed by Tasso to other persons, and thus distributed to the right and left, should have found their way into one collection—especially as some of them belonged to the Duke

of Ferrara, some to Leonora and her sister, while some of them bear evidence of having been at one time in the possession of the authorities to whose custody the poet was consigned. Count Alberti, however, explained this, by mentioning that an Italian named Foppa, of what rank or station I forget, but probably a man of wealth and consequence, took an extraordinary passion for collecting every thing belonging to Tasso, especially his manuscript writings, those of his oppressor the Duke, and of his faithful mistress Leonora. This indefatigable person appeared to have been assisted by the poet Guarini, the author of the "Pastor Fido," in whose hand-writing there is a note on most of these MSS. of Tasso.

Upon the whole I can safely say, that a more interesting collection has seldom been brought together than these papers of Tasso, and the persons connected with him, through the industry and zeal of M. Foppa, who, it seems, left them to the Falconieri family, and they in their turn disposed of them to Count Alberti. The Count has taken a world of pains to establish the authenticity of the different parts of his collection, which is accordingly enriched by the certificates of almost every man of letters in Italy, who by his researches into such matters is competent to bear testimony to the identity of the hand-writing of Tasso, and that of the other persons whose letters form part of the collection.

As it was the wish of Count Alberti to publish his papers in London and Paris simultaneously, I wrote to as many persons as I thought would take an interest in so curious and authentic a set of documents—but I have never heard a word of them since, except, indeed, that one of the partners of a great publishing house in London, to whom I wrote on the subject, told me had fallen in with Count Alberti, but they had not been able to come to any agreement about the publication.

While writing on this subject, I may mention that some weeks afterwards we visited the place of Tasso's confinement in the very hospital of Santa Anna, at Far-

rara, where he had been locked up with maniacs—strange company for one of the mightiest intellects of that age of great minds! It is only a wonder how a man of such sensitive feelings, when so treated, was not speedily rendered eligible for life to such a residence.

On one of the walls, just outside the door, we read the name of BYRON cut deeply into the stone; and the custode informed us that he saw the bard carve the letters himself.

He added that the noble poet had remained an hour and a half alone in the cell; and it is not unlikely that he then conceived the beautiful "Lament of Tasso"—or more probably he may have framed those still more beautiful and indignant stanzas in *Childe Harold*, where he gibbets the memory of the tyrannical Duke.

Speaking of Alfonso's dynasty, he says:—

XXXVI.

And Tasso is their glory and their shame.
Hark to his strain! and then survey his cell!
And see how dearly earn'd Torquato's fame,
And where Alfonso bade his poet dwell:
The miserable despot could not quell
The insulted mind he sought to quench, and blend
With the surrounding maniacs, in the hell
Where he had plunged it. Glory without end
Scattered the clouds away, and on that name attend.

XXXVII.

The tears and praises of all time; while thing
Would rot in its oblivion—in the sink
Of worthless dust, which from thy boasted line
Is shaken into nothing: but the link
Thou formest in his fortunes bids us think
Of thy poor malice, naming thee with scorn
Alfonso! how thy ducal pageants shrink
From thee! If in another station born,
Scarce fit to be the slave of him thou mad'st to mourn,

XXXVIII.

Thou! formed to eat, and be despised, and die,
E'en as the beasts that perish; save that thou
Hadst a more splendid trough, and wider sty:
He! with a glory round his furrow'd brow
Which emanated then, and dazzles now
In face of all his foes, &c. &c.*

* *Childe Harold's Pilgrimage*.—Canto IV.

CHAPTER XVI.

ON THE IMPROVEMENTS WHICH HAVE BEEN INTRODUCED INTO THE ARTS OF SEAMANSHIP AND NAVIGATION, OF LATE YEARS.

WHILE every branch of science and of the arts has been making such rapid advances on shore, it is not to be supposed that we have been altogether idle afloat. It is indeed true that, with the exception of the gigantic change which the application of steam to the propulsion of boats and ships has made, the alterations for the better in nautical affairs have not been nearly so remarkable as those on land; still they afford much matter for interesting inquiry.

With all the leading improvements which have been made in most other departments of industry and knowledge, the public have more or less become familiar. Much has been done by popular and well-written essays, not only to extend that familiarity among persons to whom it might be merely amusing, but to render such information useful to those who might be disposed to go deeper into the matter. This service which has not yet been rendered to our art might, I think, be greatly advanced by the republication, in a cheap form, of the late Professor John Robison's Treatise on Seamanship, one of the most scientific, and at the same time most practically useful, treatises ever written.

"Any thing you can do," writes a thorough-bred seaman, and very able and experienced officer, "to draw attention to the article on Seamanship in the Encyclopædia Britannica, will be doing great good to the naval service and to the country at large, every

member of which is, or ought to be, personally interested in the well-being not only of our fleet, but in that of our widely-spread mercantile marine. The great worth of that article," continues my correspondent, "is not half so well known to the service as it ought to be; and it really is so admirable a production, that I could wish you to give it to us in an appendix to your new book, even if you print it in a brevier type."

This, of course, I cannot do; but it strikes me that I shall do better by recommending to the publisher, who is also the proprietor of the great national work in question, to reprint the article Seamanship in such a form and at such a price as to bring it within the reach of every seaman who really wishes to understand the theory of his art, and who is capable of appreciating the value of such a boon to his profession.

It may not perhaps be generally known that the late Professor John Robison of Edinburgh, independently of his being a first-rate mathematician, had the very unusual advantage, for a scientific writer, of having actually served in a man-of-war for a considerable number of years. The superior means which this degree of personal experience of nautical details gave him for treating a subject so thoroughly practical as seamanship, will be obvious to every one. His essay, accordingly, though published upwards of forty years ago, is still by far the most philosophical introduction extant to the study of that complicated branch of human knowledge.

About a year ago, Mr. Adam Black, the proprietor of the *Encyclopædia Britannica*, and the editor, my friend Professor Napier of Edinburgh, did me the honour to express a wish that I should revise the article Seamanship for the new edition of that great national work, now in the course of republication. Their wish was that the article in question should be adapted to the present state of nautical knowledge, by the introduction of such improvements as had been made in the science since the publication of the third edition in 1797.

However flattered I naturally felt by such a proposal,

I saw good reason for declining it, on two grounds. In the first place, I considered that even the verbal revision of a philosophical work, written by a profound mathematician, and full of formulæ, ought to be entrusted only to the hands of a person well skilled in the higher branches of that science. In the second place, I felt in the strongest manner, that a treatise so very perfect in its way ought not to be tampered with by any person whatever. I had very often proved the value of the article in question, in the practice of seamanship on board my own ship, had seen its utility in the case of many other officers, and never heard any one speak of it except in terms of unqualified respect and admiration, as a great help to the clear apprehension of the subject.

I took the liberty, therefore, of recommending that the article should be referred for mathematical revision to Mr. Augustin Creuze, of Portsmouth Dock-yard, whose treatise on Ship-building, in the edition of the *Encyclopædia Britannica* now publishing, has justly earned for him a high reputation. This suggestion has accordingly been acted upon, to the great advantage of the article, as numerous errors had crept into the figures of the formulæ, in the course of frequent reprints.

It still appeared, however, to the editor that an appendix might be acceptable to the public, even if it furnished no more than an account, intelligible to general readers, of the chief improvements which have been introduced into the art of seamanship of late years.

I felt, I confess, reluctant to undertake so presumptuous a task as appeared to be implied even in the attempt to add any thing to an article written by Professor Robison; but I agreed to try my hand. What I wrote, I must unaffectedly say, to my own surprise, was accepted; and it now follows in the wake of the great article on Seamanship in the *Encyclopædia Britannica*, like a jolly-boat in tow of a three-decker!

When preparing the present volumes for the press, I

was desirous to introduce one or two professional chapters, on topics of general interest, perhaps useful to my naval brethren. And as the circulation of the *Encyclopædia Britannica*, enormous though it be, does not bring it within reach of many persons who take a lively interest in naval matters, it occurred to me that by modifying the appendix above alluded to, so as to suit a humbler publication, it might, perhaps, awaken a more general attention to the subject, and thus contribute to the favourable reception, by the public, of Professor Robison's article, if it should suit the views of the proprietor to reprint it in a separate and cheaper, and consequently more available form and position, than it now occupies in connexion with upwards of twenty quarto volumes.

On requesting the proprietor's permission to avail myself of what I had written for the *Encyclopædia Britannica*, Mr. Black at once asserted to my making what use of it I pleased. I have, therefore, carefully revised the whole, and have added some new matters, calculated, I hope, to render this sketch—for it is no more—less imperfect.

The improvements which have been made in the art or science of Seamanship, call it which we please, have certainly been too much kept out of sight of late years; and it is my purpose to supply, in a brief space, the deficiency complained of by many persons, whose habits entirely unfit them for gaining the knowledge for themselves, and yet, who are perfectly competent to understand, as well as to appreciate, the value of such information, when freed from the obscurity of technical language.

Most other sciences may be studied with effect in the closet. An amateur astronomer, for example, or a chemist, furnished with proper instruments, and having confidence in the skill and good faith of the leaders in the particular walk of knowledge to which his taste inclines him, may, by adopting their results, pursue the same paths with almost equal profit, and perhaps with

more pleasure than those who take all the labour, and incur none of the responsibility. But there is no royal road of this sort, by which an amateur sailor can investigate the details of seamanship, the mysteries of which, to be fully understood, must be studied afloat, actually at sea, in all weathers, and in every climate.

It is true, as all the world knows, that the results of nautical skill and exertion are not the same as they used to be. A voyage to India and back, in former times, occupied a couple of years, or more; it is now currently done in nine months, even by ordinary merchant-vessels, including the time taken to unload the outward and reload the homeward cargoes. In former days, the scurvy struck down more than half the crew of every ship which made a long voyage, and was even fearfully prevalent in the navy; now the disease is so little known, that few of our naval surgeons have ever seen it.

The numbers of all kinds of ships afloat have enormously increased, and the war of the elements by which they were formerly assailed is no less violent than it was: but assuredly a far smaller proportion of vessels are now driven on shore than were formerly wrecked. The comforts of travelling by sea, in the articles of provisions and water, are all essentially improved; and, finally, the security, as well as the happiness of all persons on board, whether passengers or crew, has been marvellously augmented by the general establishment of a better system of discipline than was known in by-gone days; whilst many old manipulations of seamanship are so modified by new contrivances, that if old Benbow, or even Kempenfelt, were to arise from the dead, he would at first scarcely know how to handle his ship.

We must not allow ourselves to be led away, however, by our vanity, or suppose that because we can navigate ships faster and better than our predecessors, our merit is greater than theirs. We should not delude

ourselves into the belief that we are indebted to ourselves alone for our vast superiority over the old mariners—or forget the immense obligations we owe to them for their skill, hardihood, and perseverance in teaching us what might be done afloat, even with means comparatively so inadequate. On the other hand, we should be anxious to acknowledge and duly to appreciate the assistance we have derived in our art, first from astronomers, who taught us to comprehend the real nature of the difficulties which seamen had to contend with; and, secondly, from men of genius, who, by the admirable books and instruments they have supplied us with, have enabled us to raise the mechanical art of seamanship to the dignity of a science. On this subject I need only refer once more to Professor Robison's article above alluded to, in the *Encyclopædia Britannica*.

It may not be without use, and it certainly must be interesting, to those who have not studied such things personally, to see by an example, how scientific seamanship is made to triumph over that groping and blundering method of navigating ships which is technically known by the name of the "rule of thumb." If we take a globe, and trace on it the shortest route, by sea, to India, and then fancy that such must be the best course to follow, we shall be very much mistaken. And yet this is very much what our ancestors actually did, till time and repeated trials, and multitudinous failures, gradually taught them where to seek for winds, and how to profit by them when found. According to this "rule of thumb" sailing, a ship had only to steer from England to Madeira, pass the Canaries and Cape de Verds, and then to make a direct course to the Cape, and thence to India. On trial, however, this experiment always failed; for on getting near the equator, a series of calms and squalls put a stop to this rectilinear scheme, and the mariners of old were then forced to toil along the coast of Africa, or were driven towards that of the Brazils, and very often they came back in utter hopelessness.

Now-a-days, the exact spot where the north-east trade-wind which prevails in the Atlantic ought to be parted with; in what longitude and latitude the intertropical calms and variables are most easily managed; over what degree of longitude on the equator the ship should pass; and finally, in what place the south-east trade-wind is to be found, and how it is to be made most use of when found; are all matters of such familiarity to the really qualified navigator, that they scarcely occupy his thoughts, but are acted upon as matters of course, and, unless some unforeseen accident occurs, absolutely ensure the success of his voyage. The line he follows, however, is by no means that which an ill-informed person would naturally have chalked out for him to follow, ignorant of the impossibility of pursuing it. On this interesting and important branch of navigation,—I mean that which refers to crossing the Line, and to the trade-winds generally,—I can with confidence refer any one wishing exact information to Horsburgh's East India Directory.

The modern navigator, by not seeking to husband the south-east trade-wind too much, but by freely "flanking" through it, sweeps past the coast of Brazil, and by boldly dashing down into pretty high south latitudes, is certain, or almost certain, of finding there such a vein of westerly wind, as amply compensates for the apparent roundabout he has made in his course. In like manner, after passing the Cape, which to the old navigators was truly a "Cabo de Tormentos," instead of vainly trying to reach India by steering straight through the Mozambique Channel, the scientific navigator, disregarding the increase of distance, maintains his southern position, and sails resolutely along a parallel of latitude, with the west wind in his poop, till he has obtained such a degree of easting, that, on hauling up to the northward, and making for the south-east trade-wind, he enters that mysterious ærial current on such terms as ensure his making it serve his purpose. If, however, he be timid or impatient, and not duly instructed by experience, he will

be very apt to haul up too soon to the northward, from not liking to run, as it appears, so far past his port. The consequence will be, that when he encounters the south-east trade-wind, he will find, instead of its being fair, that it is blowing in his teeth; and he will have to run back again to the southward to borrow a little more casting from the westerly breezes which prevail there.

Be it observed, however, that the above instructions would lead a seaman into great error, were he to make the rule absolute: for at certain seasons of the year,—that is, when the sun is far to the north of the line, and the south-west monsoon blowing in the Indian Ocean,—his proper course from the Cape to India would lead him up the Mozambique Channel, between Madagascar and the mainland of Africa; whence he would sail across the equator, and enter the Bay of Bengal with a flowing sheet. At other seasons, so far from having a fair wind on reaching India, he may have to beat up the bay, unless he has knowledge enough to know at which side to enter it, and skill enough—for it requires a good deal—to know how to profit by the land and sea breezes of the coasts respectively of Coromandel or of Pegu.

Experience has taught us that the trade-winds, which at first were thought to be perfectly invariable, are not only liable to extensive modifications in force and direction, according to the position of the sun, but that there are districts of the world, frequently supposed to lie within their influence, where no such winds are to be met with, but where, at certain seasons of the year, winds blowing in a contrary direction prevail. I may instance the south coast of Mexico, where the latitude is so low that the trade-winds might naturally be looked for, but where the influence of the sun on the adjacent continent is so powerful, that the resulting effect is a westerly not an easterly wind. In like manner, the land and sea breezes of many countries are modified by the proximity of high or low land, combined with the presence or absence of the sun. But it is impossible in

this small space to enter into details which, after all, to be really useful, must be studied in connexion with those theories by which the course of all the winds are explained. I may say, however, with confidence, that nothing is so useful in the practice of navigation as a constant attention to the statical principles upon which all meteorological movements depend; and although it will often happen that the navigator may not be able to see how the application is to be made, from a particular case to the general law, he must profit greatly in the end by a sound faith in what he knows to be right, even in the teeth of what appears to be inconsistent therewith.

In short, the truly scientific navigator, possessed of the requisite nautical instruments, by which means he may at all times be certain of his place, may almost command a fair wind at every stage of his voyage, and thus secure his passage within a certain number of days; though, in his way, he will be obliged to vary his course a hundred times from that which, at first sight, might have been thought the best, merely because, on the map, it seemed the shortest. The old proverb, which warns us that the longest way about is often the shortest way home, has perhaps its amplest illustration in the practice of modern navigation; but, let it be always borne in mind, that this is true only when all the varying circumstances of time and place are duly taken into account, and so appropriated as to give to the ship those advantages of fair wind and moderate weather, without which no voyage can be securely or speedily made. This branch of the art, therefore, more than any other, requires for its successful exercise a singular combination of the widest generalizations in theory, with the most minute and specific disintegrations of scientific research in practice. In the Indian seas especially, the whole history of the winds, examined without some theoretical clew, is a mass of confusion; and yet the profoundest meteorological science would inevitably prove not only useless, but absolutely dangerous to the navigator who should trust to it alone, without the aid

of local information, and of the improvements of modern art.

These remarkable improvements are due to the spread of knowledge over the sea, as well as over the land; and I propose to examine a few of the causes which have led to such valuable results in the practice of seamanship, as they will all be found to fall readily under that great head, in a very general, but by no means superficial manner.

It will not be expected that much should be said of the mighty revolution in nautical affairs brought about by the introduction of steam; for that subject would require a separate volume. I shall merely observe, that steam does not essentially interfere with seamanship proper, almost all the manipulations of which remain as before; whilst steam navigation, in spite of its boasted contempt of wind and tide, is still obliged to borrow so much from seamanship to complete its success, that without its aid it would often be useless, and even dangerous. I shall take occasion to point out some of the most remarkable circumstances in which the old system of seamanship is essential to the method by steam; merely remarking at present, that nearly all that branch of the subject which relates to navigation,—that is, to the method by which a ship's place is determined at sea, the proper course shaped, and the different ports of the world recognised and made use of,—remain exactly the same both in sailing and in steam vessels. Latitudes and longitudes, and the variation of the compass, are evidently just as important to a steam-vessel as to a sailing one: and though winds and currents are not quite so essential, every one who has made a steam-voyage of any length is aware how materially its celerity depends upon a knowledge of and due attention to these particulars. It is one of the chief points of a seaman's duty to know where to find a fair wind, and where to fall in with a favourable current; but the obligation, if not generally so binding on a steam navigator, is almost equally so when his voyage is a long one.

The most remarkable occasions on which steam has the advantage over sails are, in a calm, or when the wind is directly ahead. In a calm, a sailing ship is utterly helpless, and must stand stock-still; with a wind in her teeth, if it blow hard, she can do nothing, or does worse than nothing,—drifts away from her point.

There is another important occasion on which a steam-vessel, if properly handled, has a wonderful advantage over an ordinary ship; and I advert to it, first, because I do not remember to have seen it mentioned before; and secondly, because it involves some nautical considerations worthy of notice. I allude to the formidable danger of a lee-shore, in a gale of wind, when I shall suppose the weather to be such that a ship and a steam-vessel are both obliged to bring up, and that from the anchor not holding, or the insufficient strength of the cables, there is risk of their being forced on the shore. In this predicament, I have heard of a steam-vessel, by the mere agency of her steam, not exerted to any great extent, either keeping her cable slack, or very materially relieving it from the strain produced by the wind. But even supposing her stock of fuel expended, or that her machinery had got out of order, she may still be looked upon as almost as safe as a ship with her masts cut away. This, I may explain to unprofessional readers, is the most favourable condition for a ship to be in, under such dangerous circumstances. It may be asked, and with great reason, why, if this be so, should not all ships, when in danger of driving on the rocks, get rid of their masts, by cutting them away, and so place themselves in as favourable a position as the nomasted, or short-masted steamer, on the lee-shore?

To this I answer, that the operation of cutting away the masts is always a very serious one, and, like the amputation of a limb to a labouring man, is not to be resorted to till the very last extremity. Besides, it is often a matter of doubt which is the last moment of safety, and the first of extreme danger; and as the commander of the ship may never have had experience of

such critical cases, he may, and too often does, hesitate to dismember his vessel, till it is too late,—that is, when the anchor comes so rapidly home, that cutting away the masts will not stop her from driving among the breakers. The steam-vessel, however, is *already*, and at all times, in the best condition for holding on at anchor, on a lee-shore.

I ought here to mention to un-nautical readers, in what consists the advantage of cutting away the masts, when a ship is in this situation, and is in danger, from the violence of the wind, of being drifted on the rocks. It is well known that the mere hull of a ship, placed with the bow to the wind, offers but a small resistance to it, compared to what is presented by the masts, yards, ropes, and sails; for though the sails be furled, they are generally, on such occasions, but clumsily handed. As the form of a ship's bow is equally adapted, or nearly so, to passing through the air as through the water, the area offered by it to the wind is very small, compared to that which is presented by what lies above the hull. Let any one in a gale of wind on board ship take hold of the smallest rope,—the signal haulyards, for example,—and he will find it requires a considerable exertion of his strength to prevent its being drawn out of his grasp; and in proportion as the rope is large, so is the violence of the wind upon it. Now, when the immense number and great length of the whole ropes of a ship are taken into account,—to say nothing of the resistance of the lower masts and top-masts, and the yards, however sharply braced to the wind,—we shall be satisfied that the resistance aloft is many fold greater than that which the hull alone offers to the wind. Accordingly, the prodigious additional security which is imparted to a ship on a lee-shore when shipped of her masts, is well known to practical seamen. This conviction, resting on Nelson's ever-energetic mind, when told of the dismasted fleet of prizes, was the source of the last order he ever gave: "Anchor! Hardy, Anchor!"

Whilst speaking of the comparative merits of steam-

vessels and ordinary ships under a stress of weather, it may also be mentioned, that as steamers are furnished with very reduced masts and yards, they are in the most favourable condition for making sail in a gale of wind, should it not blow so very hard as to render it impossible to show any canvass. In other words, a sea-going steamer, though greatly undermasted, compared to a sailing ship, is yet enabled in a strong breeze to spread as much canvass as could be carried with advantage in a sailing ship of her size at that particular moment. It must be remembered, too, that the sailing vessel, in order to be able to make way in fine weather, is obliged at all times to carry with her, and to expose permanently aloft, an extent of masts and yards which is very detrimental to her progress in bad weather; whilst, on the other hand, the steamer stows away her fine-weather power under hatches in her coal-boxes, till the time recurs when it can be used with advantage.

To return to the improvements introduced into the art of seamanship by the skill and science of late years, I may begin by adverting to the remarkable advantages which have been gained by the extensive use of iron on board ship.

In the year 1808, Captain Brown, of the Navy, proposed the use of iron cables and rigging; but it was not till 1811 that the cables were fairly tried. They have since been used universally, and no greater boon was ever bestowed upon the sea service. The original cost of a chain cable is not much more than that of a hempen one, whilst its durability is greater, in a ratio which cannot be stated in figures. The security afforded by it is vastly greater; for it is exposed to none of the deteriorating causes which render a hempen cable, after much use, comparatively so little trust-worthy. The alternate wetting and drying, which saps the strength of a hempen cable, has no effect on one of iron. The friction against rocks, especially against coral, is often fatal to a hemp cable in a few minutes; but the same friction, after weeks of hard use, only slightly polishes a few links of the chain. In tropical countries, there-

fore, the introduction of chain cables has increased the security of ships at anchor ten-fold; but in every climate their advantage is immense. Nor does this advantage consist solely in their strength and durability, for they are managed with much more facility, occupy far less space, and are stowed away with little, or it may be said, no trouble at all; for as they are hove in, they fall quietly into, and adjust themselves in a box or case near the hatchway, from which they are drawn up when wanted with comparatively small labour. To those who remember the toil and trouble of "forming a bend" in the cable tier, the wet and the dirt, and the noise made by the numbers of men required to coil it away, these advantages will not be considered as small ones. Every one, also, who recollects the labour of unsplicing and resplicing a hempen cable on clearing hawse, operations, which often kept the hammocks on deck till midnight, will readily admit the immense saving of time incident to this grand improvement.

Several adaptations have been found necessary in consequence of the use of chain cables. The hawse-holes require to be filled with strong cases, or tubes of iron; and a most ingenious and powerful stopper has been contrived by Lieutenant (now Commander) William Chasman of the Navy, by which the cable can at any time be prevented from running out, whatever be the strain upon it. This stopper consists of a large swannecked bar of tough iron, which embraces the cable as it comes up the hatchway, having one of the ends of the curve fixed to the beams of the lower deck, by means of a strong bolt, whilst to the other end is attached a tackle, by which it can be drawn tight, and the chain pressed so firmly in its embrace, against the angle of the hatchway, that however quickly it may have been running out, or whatever strain may be brought on it, the cable is arrested almost immediately.

It is much to be desired that some other contrivance were hit upon for veering a chain cable, for which purpose this hatchway stopper is not adapted. It should consist of something which, by the mere effect of

pressure and friction, shall prevent its going out faster than is required, and yet which shall allow it to pass smoothly along, without any of that jerking which takes place when the present stopper is used for veering.

Iron cables require a peculiar but easily-learned description of management. They cannot, for example, be used in deep water, without some modification; for their weight, added to that of the anchor, is so great, that the labour of heaving up becomes prodigious. To remedy this evil, and yet to profit by the security which belongs to rendering invulnerable that part of the cable most exposed to friction by rocks, a device was suggested by Admiral the Honourable George Elliot, which having been found to answer the purpose, is now generally adopted. An eye, with a thimble in it, is formed at the end of a hempen cable; and to this is shackled, in the usual way, one of the lengths of the chain. The outer end of this length of chain being then shackled to the anchor, the cable may be used in any depth of water, with nearly as much security as if it were made of iron from end to end, and with only the inconvenience arising from the additional weight of one length of chain. Another device has lately been introduced, which many seamen prefer. This consists of three tapered tails of small chain, shackled to the chain, by which it can be spliced with ease and security to the hempen cable, with the strands of which it is married in the usual way.

One great advantage of chain cables is, that a ship may often lie at single anchor, without risk of fouling it. If the scope of chain be too short, the tide strong, and the ground either of sand or of smooth and hard materials, there will be nearly the same risk of fouling the anchor as with a hempen cable, when a ship is not moored, that is, has only one anchor down. But if the scope of cable be long, the tides not very impetuous, and, above all, if the ground consist of mud, there is scarcely any chance of this troublesome and dangerous accident happening. It may be proper to explain that

“fouling the anchor” means the entanglement of the cable with its flukes or other parts, by which its power of holding the ground is destroyed, or so materially lessened, that when a strain is brought on it, the anchor slides along the bottom, and consequently the ship is no longer held firmly.

Any one who looks at an anchor will perceive that it consists of four principal parts, two of which lie at right angles to one another, and the others at angles of 50° or 60° with the shank: this is a long, straight, and very strong bar of iron, firmly welded to the crown at one end; whilst the other end is passed through, and is firmly grasped by a stout beam of wood, called the stock. The two separate arms or flukes to which the shank is welded, lie on either side. The end of the shank, which projects several inches beyond the stock, is now fitted with a strong shackle (formerly with a ring, when hemp only was used,) to which the chain is attached. As long as the cable pulls the anchor by means of this shackle at the end of the shank, the anchor does its duty, and resists the effort to move it along the ground. If the bottom be soft, the strain of the cable has even the effect of making the bill, or point of the lower fluke, bury itself more and more deeply. The purpose of the stock, or long wooden beam which crosses the shank, is to cause the anchor to assume its proper position, or that best adapted to its digging one of its flukes into the ground. This important purpose is effected by the tendency which the stock has to lie flat, that is, horizontally on the ground—a position, it will be observed, necessarily implying that one of the flukes is up, and the other buried beneath the surface of the mud. If, by accident, the anchor, when first let go from the ship's bows, should rest on the ground with one end of the stock sticking up, and the other down, which would bring the flukes flat, or horizontally on the bottom—a position in which they would have no hold whatever—a slight strain on the cable presently puts all to rights, by tumbling the anchor over, so as to bring the stock into its true position, namely, flat on the ground, and of course the flukes

upright. This tendency is the obvious consequence of the stock being so much longer across than the flukes are, which naturally causes the anchor to tumble over into its right position, whenever the stock is not lying flat, as it ought always to do.

For many years after the introduction of chain cables, hempen messengers were used to heave them in: now chains are almost universally used, and a great expense saved. The messenger is the endless rope which passes round the capstan, and being attached to the cable by what are well called nippers, draws in the cable along with it as the capstan is hove round. Mr. Grills of Portsmouth dockyard has recently made a great improvement in the form of the welps of capstans, by which the very troublesome operation of "surging" is entirely got rid of. Iron nippers, too, must soon become universal. Chain slings for the lower yards have long been in use; and of late years chain topsail sheets and chain ties have been introduced, as well as chain gammoning for the bowsprit, and chain bobstays, all of which are great improvements.

It may be mentioned that the "riding bitts" to which the cables are made fast, the "hawse-holes," the corners of the main hatchway, and, generally, all places over which the chain passes, are now cased with iron. This is, no doubt, an additional expense; but, on the other hand, the saving by getting rid of the wear and tear of hemp is immensely greater. The tedious and difficult operation of "puddening" the ring of the anchor for the clinch of the hemp cable, which, by the way, could be well executed only by the best seamen, is now entirely done away with. And here, too, I may state, that although almost all merchant ships now carry no hempen cables, men-of-war have always two or three on board, which are often of the highest use in laying out an anchor when the ship gets on shore.

Attempts are now making, and I feel convinced that they will ere long succeed, to introduce iron-wire rigging, which is stronger and better than chain, because

less dependent on the accidental quality and careless manufacture of a single part. I cannot help remarking, in passing, how strange it is that the plan of making iron bridges of wire, so successfully adopted in Switzerland, France, and elsewhere abroad, should not yet have found favour enough in England to be fairly tried on the large scale. The noble bridge at Freybourg, in Switzerland, is 301 feet wider than the Menai bridge, and though it consists of but one span, it is at least equally strong, and has cost only a fifth part of the money. The wire bridge at Freybourg is 870 English feet span :* that of the Menai 569. The Menai bridge cost 120,000*l.*, that of Freybourg, 25,000*l.*

I do not think wire will answer for running rope ; but for standing rigging it may, I conceive, be most usefully substituted for hemp, for with equal strength experiment shows it to be lighter.

The use of iron ballast, instead of dirty shingle, is also a recent, but valuable improvement ; and though the original cost is greater, it very soon overpays itself. It was first officially established in the navy about the year 1796.

The quantity of ballast which is considered necessary to give stability to a ship has been gradually decreasing of late years. This has arisen from a variety of causes. In the first place, great improvements have taken place in the rigging, and in the masts and other spars of all ships, by which the top hamper has been much reduced ; and a smaller quantity of dead weight below rendered necessary. By the use of iron tanks, the quantity of water has been much augmented ; and other improvements in the stowage of the holds of all ships have been made, which render a less quantity of ballast not only necessary, but beneficial, to the ease of a ship at sea. An increase of beam has also for some years been given to men-of-war ; and the present Surveyor of the Navy has

* Notice sur le Pont Suspensif de Fribourg en Suisse par M. Chaley, Ingénieur Français, Constructeur du Pont (Paris 1835,) pp. 7 and 54. See also Drewry's Memoir on Suspension Bridges, p. 54. London, 1832.

carried this principle so far as to be able to make ships of war sail with a very small quantity of ballast—so that whereas 80-gun ships of the last war formerly carried 200 tons of iron and half as much of shingle, they are now sent to sea with only about 100 tons of iron ballast and no shingle at all. Some of the new ships, I believe, carry no ballast.

The next most important use of iron is in a department of seamanship which is by no means to be lightly treated of: we mean the watering and provisioning of ships. The introduction of iron tanks into the navy and merchant service has in many ships doubled, and in all very greatly increased, the quantity of water which can be carried to sea; while the quality has been improved in a manner, of the extent and blessing of which no one can form an idea, unless he carries in his recollection the filthy stuff which it was so often the lot of seamen to drink in by-gone days. The following statement shows, in a rough way, the gain of stowage.

The cask called a butt occupies about 35 cubic feet of space in a ship's hold; and this space, if it were entirely filled with water, would contain 217 gallons. A butt, however, actually holds only 108 gallons; so that one-half of the space is lost by the thickness and form of the cask, which is the worst possible for stowage, so far as room is concerned. An iron tank, of the kind at present made for ships of war, is called a four-feet cube, though it measures about an inch more in its external dimensions, and occupies 68 cubic feet of space. This area, if entirely filled with water, would contain 424 gallons; but it actually holds 400, which is only 24 gallons less than the space could possibly contain. In other words, by using casks, you lose eight-seventeenths, or nearly a half, of the stowage-room, whilst by using tanks you lose only one-seventeenth.

A farther increase in the stowage of water is gained by having smaller iron tanks made either of a wedge, or a flat form, to suit the curve of the ship's hold, or to enter spaces too low to receive cubical tanks: of these there are twelve different sizes.

A single example of the change which took place in a line-of-battle ship, will show the gain effected by employing iron tanks instead of casks. The *Melville*, of 74 guns, when fitted with casks, stowed 47,624 gallons of water, or $212\frac{1}{2}$ tons. But when iron tanks were substituted, she stowed 88,232 gallons, or 394 tons, or about four-fifths more water. Thus, while the *Melville*, with a crew say of 600 men, at a gallon of water each per day, could remain at sea for only 80 days, or not quite *three* months, if it were kept in casks, she might remain at full allowance, 147 days, or very nearly *five* months, if the water were stowed in iron tanks.

I have recently heard of some ships in which the bread, and other dry provisions, were stowed in iron tanks, with great advantage, not only in respect to stowage, but in preserving the provisions from decay. In hot and damp climates this becomes a primary consideration. In *H. M. S. Andromache*, under the command of my gallant friend Capt. H. D. Chads, C.B., during the long and arduous campaign against the Burmese, great part of the dry provisions were kept in iron tanks previously well dried by red-hot shot. By this precaution, the whole of the bread, flour, pease, cocoa, and rice, being excluded from the air, was fit for use to the last; and this able and energetic officer being thus enabled to keep his crew in comparative health, rendered admirable services to his country. Had not this plan been adopted, more than half the provisions of the ship would probably have been devoured or destroyed by the weazels and cockroaches!

This recalls to my recollection the preserved meats, soups, and vegetables, in cylindrical tin cases, first devised I believe, by M. Appert, a Frenchman, and now in general use at sea. These meats are expensive, no doubt; but in the long-run they often prove not so costly as live stock, because they eat and drink nothing. In all her Majesty's ships these preserved meats have long been supplied to the sick; and I am of opinion it would be sound economy for the government to prepare them

in large quantities, and serve them out once or twice a-week to the whole ship's company.

It may be generally stated, that within the last forty years the quality of the provisions of every kind served out in the navy, has been very greatly improved, and the well-grounded complaints of the seamen in former times, on this score, entirely removed.

The next most material change for the better, to which I may advert, in speaking of seamanship in the most extensive sense of that word, relates to the manner in which all ships are now navigated from port to port, and to and from the most distant parts of the globe, not only with far greater celerity, but with much greater safety than formerly. This truly wonderful improvement, which has of late years been introduced into the art of seamanship, in shortening voyages and adding to their security as well as certainty, is due, mainly, first, to the superior knowledge of the persons in charge of ships; secondly, to the improved quality, lower cost, and greatly-increased number of scientific instruments, books, and astronomical tables, now in the hands of every seaman; thirdly, to the numbers, accuracy, and cheapness of the charts of almost all the navigable regions of the globe; and, lastly, to the more extensive and correct knowledge which seamen possess of the phenomena of the winds, weather, currents, and tides of the ocean. To these vast helps, which every sailor may now avail himself of, almost mechanically, there may be added others, which those only can profit by who, to long experience, add a taste for science, which not only sharpens the observation, but enables an expert navigator to appropriate to the purposes of his voyage, the numerous variations to which the elements are subject, but which no books, no rules, nor even talents, can effectually teach the mere seaman how to apply. Nothing, indeed, is more difficult in the practice of this branch of seamanship, than removing from the mind of an old sailor erroneous impressions as to fact, even when substantial means of correction are lying on the table. The truth is, the navigable world is so wide, the

phenomena of nature so grand and varied, that until men are schooled by actual experience, they have not the means of grasping a sufficient number of observations at once, to enable them to generalize into a practical shape, the complicated art of navigation.

In the first rank of modern instruments used at sea, stands the sextant—not the old wooden quadrant of our grandfathers, and even some of our fathers in the art, but the brass sextant of Dollond, Troughton, or Cary, divided to ten seconds, and capable of taking lunar distances with precision. With such an instrument in his hands, and with such a nautical almanack as ours now is, there is no magician who could cope with a well-practised seaman in the performance of wonders.

What human feat, I may ask, can exceed in the exact determination of a ship's place in the midst of a boundless ocean a thousand miles from land? This marvellous quality of exactness, or rather of infallibility, within certain appreciable limits, distinguishes the sextant from all other nautical instruments. Its operations are connected with those of the sun, moon, and, stars, and, by the nature of its construction, partake of their certainty; whereas the chronometer is essentially a fallible instrument, and, though eminently useful in navigation, and much more nice in its determinations, can never be depended on as the sextant can. These two instruments are admirable allies, but neither is sufficient, if used without the other, to meet the wants of modern navigation. A chronometer may, and often does, change its rate, and thus it may deceive instead of instructing the mariner, without his having any suspicion of its misleading him; and though the chances of its doing so without detection are much lessened, by adding two or three more chronometers, still there never can be any certainty in the results. On the other hand, the errors of a sextant lie all within the reach of detection and appreciation. They cannot, it is true, theoretically speaking, be fully corrected, yet they may be sufficiently compensated for in practice, which is all the seaman need

care about. A single illustration will make this plain, even to those who have not attended to such subjects.

The longitude is found by measuring with a sextant the angular distance between the moon and a star; and if the instrument used were perfectly correct in all its adjustments, true in its centering and its graduations, and the distance were properly observed, the result would be quite correct. But experience proves that every instrument, even after all the adjustments have been made as carefully as possible, does in fact measure the angle either too great or too small; and consequently the longitude which results from it will inevitably be too far east or too far west. The manner in which this evil is got rid of is as follows:—If the ship be in the west longitude, and the star observed lie to the *eastward* of the moon, and the sextant measures the angular distance *greater* than the truth, the resulting longitude will be less than the truth. If another star be now observed, lying to the *westward* of the moon, and the same instrument is used, the distance will as before be measured *greater* than the truth, but the resulting longitude will in this case be just as much *greater* than the truth, as it in the first instance was *less*; but the mean of the two will of course be near the true longitude. By seeing a sextant in this manner, and by taking a sufficient number of observations on both sides of the moon, when the distances are nearly the same, so close an approximation may be made to the true longitude, that not only may the ship's place be found near enough to steer by, but the errors in the rates of the chronometers on board may be ascertained, and a fresh departure be taken, with nearly as much confidence as if a well-known headland had been seen. For all short voyages, such as those between port and port in the same country, chronometers may be pretty confidently reckoned on, since the chances of their varying from their previously ascertained rates, in the course of a few days, are proportionably small. In like manner, the intermediate short runs made by the agency of the chronometers, between lunar and lunar taken at sea, may be relied upon in practice.

Our neighbours the French, who are excellent navigators, use the reflecting and repeating circle much more than we do; but I have no hesitation in recommending the sextant as much the superior instrument of the two for real work. Theoretically, no doubt, the circle is more perfect; but it has disadvantages which, after some degree of experience, I confidently affirm, render it less useful to a seaman than the sextant. In the first place, its great weight, and the larger surface it offers to the wind, render it more fatiguing to use, especially in bad weather. In the next place, its radius being generally much shorter than that of a sextant, the divisions on the limb are far less easily read off; a serious objection to the use of a circle at night, when every experienced seaman knows that the best work in lunars is always done. If Troughton's circle with three verniers be used, which implies six readings for every complete observation, the labour is highly irksome. Even if the repeating circle be employed, the risk of error, in the extreme nicety of the clamping and other manipulations, and the uncertainty of the adjustments, often prove an overmatch for the simplicity of the single readings off, at the commencement and end. In short, I feel sure that under the troublesome varieties of circumstances which are to be encountered at sea, a well-practised navigator, with a sextant in his hand, will do twice as much good work in a given time, as he could do with any description of circle which I have had the good fortune to meet with. On shore, indeed, the circle may often be used with great effect.

The next in order of importance in the list of nautical instruments after the sextant, is the chronometer, an instrument to which modern navigation is indebted for very great service. I well remember when chronometers were not only not in general use, but were rarely employed except on voyages expressly scientific. It is difficult to describe the degree of mortification, I may almost call it grief and indignation, with which practical men, familiar with the use of such instruments as I have been describing, and fully aware of their impor-

tance in adding to the security of ships, and in shortening voyages, witnessed in old times the contempt, or at least the neglect, with which their representations were treated even by those most interested in their general adoption. They saw vessels fitted up with every other description of costly equipments, with accommodations of the most showy description, and with stores of all kinds in profusion, while neither a sextant nor a solitary chronometer ever formed in those days, except accidentally, a part of their provision! If the captain *happened* to know any thing about such matters (for he was not required to do so,) and knowing how advantageous they were to the success of his voyage, asked to be supplied with them, he was told "that if he chose, he might provide himself with these instruments;" and if the poor man could not afford to purchase them, the ship, however valuable, was actually allowed to sail without one of the most important parts of her nautical equipment. Can any absurdity, or almost any crime, equal this?

I could relate several instances, some of which have fallen under my own knowledge, and others I know to be well authenticated, of ships and all their crews, passengers, and cargoes, being demonstrably lost, merely from the want of a chronometer, which by costing the owners forty or fifty pounds, might have saved them as many thousands! Some owners were influenced by a petty spirit of economy, ill understood; but by far the greater number were misguided by their ignorance. Happy should I feel could I persuade the owners of ships, and still more those who ensure them, to see that their best interest lies in providing the vessels, in the safety of which they are so deeply interested, with proper scientific instruments, and, as a necessary concomitant, securing the services of commanders really competent to use these instruments in a seaman-like manner. The importance of all such enlarged considerations has no doubt of late years been gradually making its way, to the great improvement of navigation; for the owners of ships have begun to find out, partly from a more scien-

tific knowledge of the matter, and partly from the mere instinct of gain, that an attention to this branch of a ship's outfit contributes to their pecuniary profit, and that if it is really worth while to provide sextants, chronometers, and charts, it is not less so to place them in hands trained to their use. Thus the standard of the characters of the commanders of our merchant vessels is raised in proportion as their scientific acquirements are advanced, and, in the end, the whole community is benefited, by the increased security, expedition, and profits of commercial enterprize.

In all these respects the improvement has been very remarkable within the present century. Sextants and chronometers were no doubt used from the time of Cook, but they were in the hands of only a very few navigators. In the present day they are in general use; and if they could be made for rather less money, as I feel confident they might be, their use would become universal.

During the last thirty or forty years the scientific education of our naval officers has been rapidly improving; and the recent establishment of the Royal Naval College at Portsmouth, on an entirely new footing, is at once an evidence of the advance alluded to, and a guarantee for its progressive improvement. This applies with equal force to the establishment on board H. M. S. Excellent at Portsmouth for the instruction of officers and seamen in the important art of naval gunnery.

When enumerating the scientific instruments which have been introduced into the art of seamanship, we must not forget the marine barometer; the principle of which, so long well known on shore, has only very lately been adapted to the uses of navigation. This adaptation is accomplished in the simplest way imaginable, by merely contracting the throat of the tube which holds the mercury, at some convenient point of its length, in such a degree, that the oscillations of the fluid, which the motions of the vessel would otherwise cause, are so much checked, that the height of the column can be ob-

served, if not quite as accurately as on land, at least with sufficient precision to give the seaman indications of changes in the winds and weather.

Many persons suppose that a marine barometer, without any other help, can always foretel the weather. Now, except in certain cases, this is quite a mistake; for unless its indications be carefully considered in connexion with other meteorological phenomena, they may often lead a ship into the most serious scrapes. This arises from there being at times a considerable degree of ambiguity in the predictions of the barometer, which therefore require to be checked by other observations.

It may be said generally that, in north latitude, when the mercury rises in the tube, a northerly wind may be expected; and when it falls, a southerly wind. If, however, the wind be already to the northward, and the mercury rises, we may then pretty safely infer that the weather is likely to be fine. On the other hand, if it falls when the wind is to the northward, we can merely anticipate that one of two things is likely to happen; namely, that the wind is either coming from the southward, or that the weather is likely to become stormy. We can never entirely remove this ambiguity even by studying the appearances of the sky. Again, if the mercury rises when the wind is to the southward, that rise may indicate either that fine weather will ensue, or that the wind will soon shift to the northward. Nevertheless, in spite of these ambiguities, the marine barometer is a most powerful auxiliary to navigation, when properly dealt with.

It may be useful to bear in mind, both at sea and on shore, that when the mercury in the barometer falls below 29 inches, and still more if it approaches 28½ inches, a hard storm may almost certainly be predicted. Under such circumstances no ships, or small vessels, should leave their anchorage—and all boats should be prevented from leaving harbour. I feel indeed quite certain that if seaport towns, and even fishing villages, were provided with barometers, and that their indications were observed and made public by some recog-

nised competent local authority, for the information of the parties concerned, there would be a great saving of lives and property every winter, all round the coasts of these islands.

For more than twenty-four hours before the great gales of November 1840, my barometer at Portsmouth foretold so unequivocally the approach of a furious storm, that I have good reason for believing, if this fact had been publicly announced, many boats, and perhaps many ships and their crews, would have been saved from the destruction into which they ran themselves, from sheer ignorance of the impending bad weather, of which there were no other indications.

It is not my purpose, however, to write a treatise on seamanship, but merely to give a sketch of the most material advances which have been made in this thoroughly practical science, since the third edition of the *Encyclopædia Britannica* was published. It will be enough, therefore, to mention that the use of the barometer at sea consists in giving the seaman information before-hand of the changes likely to take place in the direction as well as force of the wind; or, which is often fully as useful, to let him know that, in spite of appearances to the contrary, there will be no change. Cases intelligible even to unprofessional persons may easily be furnished by any seaman's memory. I remember once rounding the Cape of Good Hope, on a voyage from China, in a crazy bark, short-handed and ill-found, but with a fair wind, and the weather so moderate that every sail could be carried with advantage. To all appearance, squally and perhaps stormy weather was coming on; so that, had I not possessed a barometer, ordinary nautical prudence would have induced me to shorten sail before night, and thus we should have lost the charming fair wind which was co-operating with the current to sweep us rapidly across the bank of Lagulhas. But as the mercury promised a continuance of fine weather, I carried all sail, sent the people to bed, rounded the Cape in safty, and reached the trade-winds in time to accomplish a successful voyage to St. Helena

and home. Nearly in the same region, and under circumstances very similar, I was once grievously tempted to trust rather to appearances than to the more substantial assurances of the barometer, and on the approach of night to make more sail, instead of taking it in. As the darkness began, however, the confidence and pride of personal experience gave way to the warnings of the instrument. The sails were close reefed, and every thing made snug for a breeze,—greatly to the surprise of the sailors, who saw no cause for these precautions. Towards mid-night a gale came on, which had it not been anticipated, would speedily have taken in our sails for us, by blowing them from the yards. The success of the voyage in this case also was chiefly due to the barometer.

In speaking of nautical instruments, I ought not to omit mentioning Massey's Patent Sounding Machine, and the Patent Log of the same ingenious person, both of which are highly useful in navigation, inasmuch as, by means which are more to be depended upon than any other, they furnish the navigator with two very important elements in determining the place of his ship by dead reckoning. The sounding machine gives the depth of water; the log, the actual distance which the ship has passed through it.

When deep soundings are taken by the ordinary lead and line, however expert the seaman may be, unless it be daylight, the water very smooth, and the ship's way effectually stopped, an enormous depth may very often be obtained. But with Massey's sounding machine, as I have amply proved by day and by night, in all weathers and in all seas, the results are equally exact. The same praise may be bestowed upon Massey's log, which as an ally to the chronometer is of the greatest possible use.

Without dwelling farther on this tempting branch of the subject, I venture to give one practical recommendation, which may possibly prove useful both to the owners and commanders of ships. It is, that as much responsibility as possible should always be made to rest on

those instrumental parts of the equipment which science, and an adequate experience of its application, show to be really useful. The owner of a ship ought to be free, and even generous, in his supply of sextants, chronometers, barometers, and charts to his captain, sure that, if he be chosen for his capacity, the cost of such supply, however large, will, in the end, be repaid fifty-fold. On the other hand, a commander so confided in, should study to use such means of instruction, as not abusing them. It is very advantageous that he should be possessed of a certain knowledge of their principles, in order to have that degree of faith in their application to practice, without which they may prove worse than none at all. I have known some ships totally lost, and many voyages doubled in duration, merely by the ignorant misapplication of a figure, or of any algebraic sign. But if the captain knows the proper use of his instruments, he should trust to them, as he is himself trusted by his employers; and by resting upon them that responsibility which they are far more able to bear than he can be, however extensive his experience, he will make out his voyage in safety, and learn by degrees not only to feel, but to act on the belief of the uniformity of the laws of nature, in the midst of the wildest apparent confusion.

I had almost forgotten to mention, amongst the modern improvements in seamanship, the immense advantage of correct charts. To any one accustomed to use such charts as are now on board even the worst-found ships, the sight of an old "sea map" is enough to make his hair stand on end. In the first place, on looking at the dangers which really exist, but which are omitted in the old charts, he wonders how ships in those times ever escaped destruction; and in the next, he finds the sea so thickly covered with rocks, and shoals, and those vague "vigias," now known to have no existence, that his admiration is great of the boldness of those mariners who could sail on at all during the night.

The governments of most civilized countries, but that of England far more than any other, having taken up

this matter in earnest, and sent their surveyors abroad, like geographical missionaries, the world has been put in possession of charts of all those harbours, coasts, and seas which are most frequented. So accurate is now the construction of maps and charts, that ships duly provided with nautical instruments need scarcely ever incur the danger of running ashore, except by stress of weather, or experience any difficulty in finding safe passages amongst the most complicated sand-banks, coral reefs, or any other description of sub-marine dangers, the terror and bane of old navigation.

In nothing naval has there been a more remarkable advance than in the signals used on board Her Majesty's ships. On this subject it may be enough to say that, whenever two ships are in sight of one another, they are no longer left, as in former times, to the mercy of a few vague, general signals, often of the most ambiguous import. Any two ships, or any number of ships, can now communicate with one another as fully and correctly, and almost as rapidly, as if they were within hail. The telegraph, indeed, as the word implies, gives to vessels at sea, literally, the power of writing at a distance, in the air, with their flags, just as the Chinese often do in conversation, with their fans.

It would lead me beyond my limits were I to go into farther detail; in order to point out the various minor improvements which have been introduced into the practice of navigation; though I feel strongly tempted to describe the scientific remedies, for example, which have been applied to the steering compass by Professor Barlow, to correct the local attraction caused by the great additional quantity of iron that has lately been put on board all ships. For a similar reason, I must omit all mention of the new methods of constructing ships, stowing their holds, making their masts, and generally the improved mode of rigging, fitting out, and working ships. These details being all parts of the same course of improvement, would enter naturally into an express treatise on seamanship, but are too voluminous for a mere sketch.

There are two topics, however, on which I must be allowed to touch for a moment. One is the improved discipline of the British navy, and the consequent amelioration in the character of all the seamen of the country. The other is the change in the armament of the ships of war, and the superior training of our seamen to the duties required by this change. Both of these points have so material an influence on the prosperity of the country, and have become so completely part and parcel of the seamanship upon which its glory as a nation depends, that on this occasion I cannot pass them over in silence.

There can be no good seamanship without discipline; for it is as essential to the correct working of a ship that there should be a well-understood subordination established on board, as it is to the correct going of a clock that all its wheels and pinions should be made to fit, and be so placed as to work properly into one another. To carry on this illustration, it may be said, that whilst the main-spring of naval discipline is a sense of duty, even this strong motive would not be enough to produce the desired results, without the intermediate agency of an organized system of discipline, the object of which is, to assign to each person on board a specific set of duties, all which contribute to the main purpose; and thus, as far as may be possible, to arrange and condense the energies of the whole into one course of uniform action, subject to the will of a supreme directing authority, who is responsible to the country at large.

In strictness, this well-defined system of discipline belongs only to the naval department of seamanship; but in a great measure it also applies, by transmission, to the merchant service, where it works by the joint agency of custom, example, and the several interests of the parties concerned. So large a mass of the merchant-seamen of the country are employed in the navy, and so many naval officers in the merchant service in peace, that since seamen, by the very nature of their lives, are perpetually changing from one service to another; a kind of amalgamation insensibly takes place. Thus the discipline established on board our ships of

war, under the sanction of official authority and long-established usage, pervades, more or less, the whole profession of the sea. In this view of the matter, the improved discipline of the navy has an important bearing on the well-being of the country, in all those relations connected with our insular situation; just as it might by no strained analogy, be said, that the education, discipline, and fixed doctrines of the Established Church have a salutary influence on the religious interests of the country, into whatever number of Christian sects the population may be nominally divided.

The details of this branch of the subject might, I think, easily be made very interesting. I must content myself, however, with saying that of late years great pains have been taken to raise the moral character of seamen by education, and by teaching them the advantages of sober and orderly habits, to beget a feeling of self-respect, which is at the root of all good discipline. Religious instruction, gently applied, and without any of that high-pressure cant, for which the sailor, of all mortals, has most abhorrence, has been most beneficially introduced. Light general reading also has become general afloat, as well as elementary instruction; and there cannot be a doubt that the seamen are in consequence more correct in their moral conduct. The whole system of punishments has been much modified; for in place of the lash, which at one time regulated every thing, a desire to prevent crime, and to lead the sailors to act from principle, has been generally substituted with great effect. In fact, when such a spirit as I have just alluded to, however engendered, pervades the captain, officers, and petty officers, the sailors forming the mass of the crew, readily fall into the same current of duty, and all goes on cheerfully. The power of using corporal punishment exists still; and that it ever must exist in the navy, is the opinion of every person well informed on the subject, and who knows the character of seamen and the duties which are required of them on board a man-of-war. There are no persons more fully convinced of this necessity than the sailors themselves,

or who are more sensible that, under the wise and benevolent modifications now officially established in the navy, it is by far the most effective, and, at the same time the most gentle method, of preserving order among those refractory subjects who unfortunately are always to be found in every ship. Without the power of occasional corporal punishment, I conscientiously believe it would be impossible to restrain such persons within any bounds of decency, or to prevent them from becoming a curse to those about them; while their lawless habits would unsettle the arrangements of the best-regulated ship in the fleet, and, in the end, render her, instead of a bulwark to defend the country, a source of national weakness and dishonour.

Since the peace of 1815, all the maritime nations of the world have been gradually increasing the size of their ships of war, and adding to their weight of metal. Recently, too, the use of shells has been introduced afloat; a measure of questionable policy on the part of that nation which commenced it, but which we and others are of course obliged to adopt. The shells are not, as heretofore, fired from mortars only, but are thrown from the long guns used in ordinary warfare in projecting both solid and hollow shot. How far this new weapon may modify the seamanship of naval engagements it is difficult to say. In the mean time, great pains have been taken to train a large body of seamen gunners, including of course a proportion of highly-educated officers of all ranks; and guns of the most approved calibre for shell practice have been placed on board every ship in the navy. The establishment of this new system of exercise, through the agency of an express gunnery department of instruction at Portsmouth, and the manner in which it has been enforced in all our ships, have produced a marked effect on the habits and character of the seamen throughout the fleet.

Before closing, it may be expected that I should say something of the probable influence of steam navigation on naval warfare; and I do not shrink from committing myself by an opinion on this point, though it be one

much disputed among professional men. My notion is, that the introduction of steam will make no difference whatever in the result of any contest in which we shall be engaged, however the tactics may be modified thereby. The great national battle must still be fought, as it always has been, and ever must be fought, by large bodies of disciplined men, properly led, and properly armed; and the victory, as formerly, will be decided in favour of those who have the best national spirit to urge them on, or who, being equal in those respects, bring the greatest number into the field. Line-of-battle ships, in this view of the subject, are merely convenient vehicles in which well-trained warriors are brought hand to hand to settle their differences by hard fighting. Steam will enable them either to come together more quickly, or to avoid coming together at all, as the case may be; but neither steam nor any other mechanical assistance, will ever dispense with the moral agency of trained men, by whose conduct and courage alone the issue of all great wars must be determined; and we have the highest authority for saying, that it is in such wars only that England ought ever to be engaged.

I have heard it suggested, and I think with not less probability than ingenuity, that naval steamers will take the same place in fleets that cavalry have long done in armies. It is a very important place, no doubt, but it is not one which decides the eventual fate of the war; *that* is always the work of the infantry. The cavalry protect the flanks, and otherwise help the infantry to get into action with that of the enemy opposed to them; and when these are broken, they cut in upon them and do much execution. In like manner, armed steamers will guard the edges of fleets, tow line-of-battle ships into action, and when the enemy is discomfited will come in with desperate effect to reap the iron harvest. Still I am of opinion, that the great battle which decides the fate of empires must ever be fought by men, that is, by numerous bodies of disciplined men acting together, duly led, and fighting under the influence of national sentiment.

It is impossible to impart this sentiment to machinery; and though I do not deny that, occasionally, a steamer, armed with guns of enormous calibre, may grievously annoy a line-of-battle ship in a calm, or under some other untoward circumstances, I am fully satisfied that, by proper arrangements, every sailing ship may be so armed and worked; that the moral and physical agents on board of her will prove an overmatch for that power which relies for its superiority mainly on its mechanical machinery. I have no doubt, too, that ere long, steam-engines will find a place on board all large ships of war. These will of course be high-pressure engines; for the absurd and totally unsubstantial prejudice against this modification of steam power will, in the event of a war, if not long before, give way to the prodigious convenience in the way of stowage, and other advantages, which point out the expediency of its use in all sea-going vessels without exception. To what extent ships of war may require to be fitted with steam power, is a question which must depend on circumstances that cannot be foreseen; but that eventually they must have, within themselves, some such means of locomotion, besides what they borrow from tug-boats, I hold to be quite certain.

I have not touched upon various other improvements, of a minor nature in themselves, but which, when taken together, contribute materially to the superiority of modern navigation over the old system. The strength and form of anchors, their power of fixing themselves in the ground, and the degree of tenacity with which they maintain their hold, have all been greatly improved. The mooring blocks substituted by the late Mr. Park, master attendant of Portsmouth dock-yard, for the costly and clumsy mooring-anchors and claws of our great naval ports, is a vast improvement. The capstans for heaving up the anchors have also received great and important additions to their efficiency. The iron spindle is among these; and the plan devised by Captain Phillips for increasing the power of the capstan is another. The strength and capacity of the boats of men-of-war have been increased without adding

proportionably to their weight. The masts and spars generally and the rigging which supports them, have been rendered at once stronger, lighter, and easier handled. The guns, gun-carriages, and I may say the whole of the gun-gear, have been brought under one distinct and systematic head; and now that all our ships of war, from the largest to the least, are armed with 32-pounders fore and aft, this generalization has been still farther extended. The hulls of Her Majesty's ships also have undergone of late years many remarkable ameliorations; but on this subject I must refer to my friend Mr. Creuze's admirable treatise on Ship-building in the *Encyclopædia Britannica*, which I am glad to see is republished separately.

Lastly, but by no means least, is the great improvement which has taken place in the manners and education of all ranks and classes of young officers, and even of the foremost sailors, who, though they are still very far from the models of good-breeding, or worthy examples of moral habits, are essentially less reckless and vicious than they were formerly,—thanks to the pains which have been taken to instil in them a just sense of religious principles!—for the old and absurd, and I may say impious opinion, that a sailor was the worse for being religious, has long been exploded. Both officers and men who do their duty to their queen and country, under a strong sense of the paramount duty which they owe to their God, are found by experience not only to be the best sailors in the fleet, but those who in seasons of danger are the bravest,—in seasons of difficulty, the most to be relied upon for steadiness and fortitude.

The great care now taken to prevent the introduction of young officers into the navy who shall not be possessed of competent merit and knowledge, and to expel those who, after entering it, shall not behave like gentlemen, has given a higher tone to the general habits of the rising generation of officers than they ever before possessed. I do not pretend that there were not formerly as worthy and as well-behaved midshipmen as there are at present; but certainly there was a time,

which I can well recollect, when the general character of the cockpit manners was not unsusceptible of some small amendment.

With respect to officers of higher rank, whether in command of fleets or of ships, so very much of their merit as public servants must always depend upon their individual talents, discretion, temper, and zeal, rather than upon those extrinsic elements in the professional character of an officer which are capable of being modified, by rules and regulations, or by any outward causes whatsoever, that I dare not venture even to form an opinion as to whether or not the naval service is, in this respect, better now than it was fifty, or sixty, or even a hundred years ago.

By dint of skill, courage, and well-ordered armaments, we may prepare our ships of war to cope with the enemies of our country; by the assistance of science and the well-directed results of experience, we may so far improve the arts of navigation that our ships may encircle the globe and enter every port in it without touching the ground in its most shallow or rocky districts; and finally, by the perfection of seamanship, they may defy tempests, work off lee-shores, rig jury-masts in place of those carried away by the board, and otherwise counteract most of the ills which nautical flesh is heir to.

Still there remains one formidable antagonist with which seamen have to contend, which it might, at first sight, seem altogether hopeless to oppose; and yet this potent enemy, like all other giants, real and fabulous, may be conquered by the exercise of a sound faith, and the agency of means which God has given us to use for our protection. I allude to lightning; the effect of which on ships, in almost all seas, but particularly between the tropics, and very extensively also in that great arena of our fleets, the Mediterranean has been from all time, and, to the disgrace of modern science, is still the cause of an immense annual loss of life and property.

I am wrong, however, in saying that this is a dis-

grace to modern science; for science has done its part most admirably, as will presently be shown; a philosopher of great talents as well as knowledge, and possessed of the most uncommon degree of industry, perseverance, and skill, having not only investigated the whole subject, and described the appalling nature of the evil, but devised a complete protection for its attacks in every stage of their terrific operation.

Ever since I have been at sea, now nearly forty years, I have taken more or less interest in this subject; but it was not till the late Dr. Wollaston called my attention to it, and congratulated the profession on the discovery, by Mr. William Snow Harris, of a complete safeguard against lightning, that I had any hopes of our ships being effectually protected against this most formidable of all enemies. I confess that when I heard not only Dr. Wollaston, but Sir Humphrey Davy and Dr. Young, as well as many other distinguished and influential men of that day, give it as their opinion that a perfectly safe lightning-conductor had been at last adapted to all classes of ships, I little thought that upwards of twenty years would elapse and that the method alluded to should not be universally adopted at sea.

It is, indeed, truly astonishing that while such immense sums are expended on every other description of equipment which can render a ship efficient for the purposes of war or commerce, one of the most important of all—protection against lightning—should either be omitted altogether, or which, in practice, comes nearly to the same thing, should not be systematically and universally adopted.

Every thing that wood, iron, and copper can do for strength is now adopted in the construction of the hull of a ship, without one moment's thought about the cost. The masts are fashioned out of the choicest pines, the ropes laid up of the very best hemp, the sails made of the strongest canvass, and even the quality of the pitch and the tar are studied. The ship, above water, is carefully and repeatedly painted, that the wood-work may not be injured by the sun; while her bottom is protected

from the action of the sea, and the worm, by a most expensive coating of copper, in the manufacture of which the greatest pains are taken. In ships of war, an extensive supply of guns, powder and shot, and other means of offence and defence, are placed on board, with not a thought of the cost, only the efficiency of the armament being ever taken into account. And lastly, a captain, officers, and crew, at wages commensurate to their capacity of working the ship with advantage, are put on board, and half a year's provisions, of the best quality, laid in, at an outlay which must always be very heavy.

In short, no sort of expense is dreamed of as a matter of serious moment, compared with the thorough efficiency of the ship. The same may be said of by far the greater number of merchant ships; for their owners, like the Government of the country, have learned that the truest economy consists in fitting out their ships with every thing which experience has proved to be really useful.

How has it happened, therefore, in these days of intelligence and general improvement, and indifference to expense when an obviously important addition may be made to the strength and efficiency of our marine, whether naval or mercantile, that so very material an equipment as that of Lightning Conductors to our ships should have been almost entirely omitted? Whatever be the cause, I cannot for a moment doubt that when once the public are made duly aware of the extent of the evil, and of the simplicity as well as cheapness and perfect efficiency of the remedy which has been found out, that the mischief will be speedily and effectually done away with.

As long as the methods used for this purpose were either not sufficient, even when duly attended to, or were so inconvenient when available as to cause more trouble than the risk was often thought worth, it is easy to understand why all ships should not have been fitted with lightning conductors; but when a perfectly efficient method of protection had at length, been devised and

fully tried and found effective in all cases, and when that method is found to require no extra care, causes no inconvenience, is always in its place, and cannot by possibility be removed from it, and when it costs scarcely any thing in comparison to the other equipments freely lavished on every ship, it is very difficult to conceive how any vessel can be allowed to put to sea without protection.

To exhaust the subject of lightning conductors would require ten times the space which I can allot to it here; but I am happy to say that it has been brought before Parliament, and in consequence a Commission was appointed by the Admiralty, of thoroughly competent persons, to investigate the whole subject. The report of this commission is now before the public, and I refer to it with confidence as one of the most interesting, scientific, as well as practical, documents ever laid on the table of the House of Commons. It was ordered by the House to be printed on the 11th of February, 1840; and it will be found that the evidence and the report, taken together, so completely exhaust the subject, and place the result on such a substantial foundation of actual experiment and philosophical induction, that every candid mind must come to the same conclusion.

The commission alluded to consisted of nautical men, and men of science of unquestionable character and acknowledged ability. Rear-Admiral Griffiths was chairman; Rear-Admiral Sir James Gordon, K. C. B.; Captain J. C. Ross, R. N.; Professor Daniell; Mr. Fincham, Master Shipwright of Chatham Dock-yard, were members; and Mr. Waller Clifton, Secretary. These names alone are sufficient vouchers for the rigid impartiality and fairness of the report.

The Board of Admiralty framed a set of instructions well calculated to ensure a critical investigation of the points bearing on this important question. This commission, after a full inquiry, made a report, which was laid before Parliament 24th January, 1840, and has since been printed by order of the House of Commons. The commission called in evidence the officers who had commanded the ships in which Mr. Harris's conductors

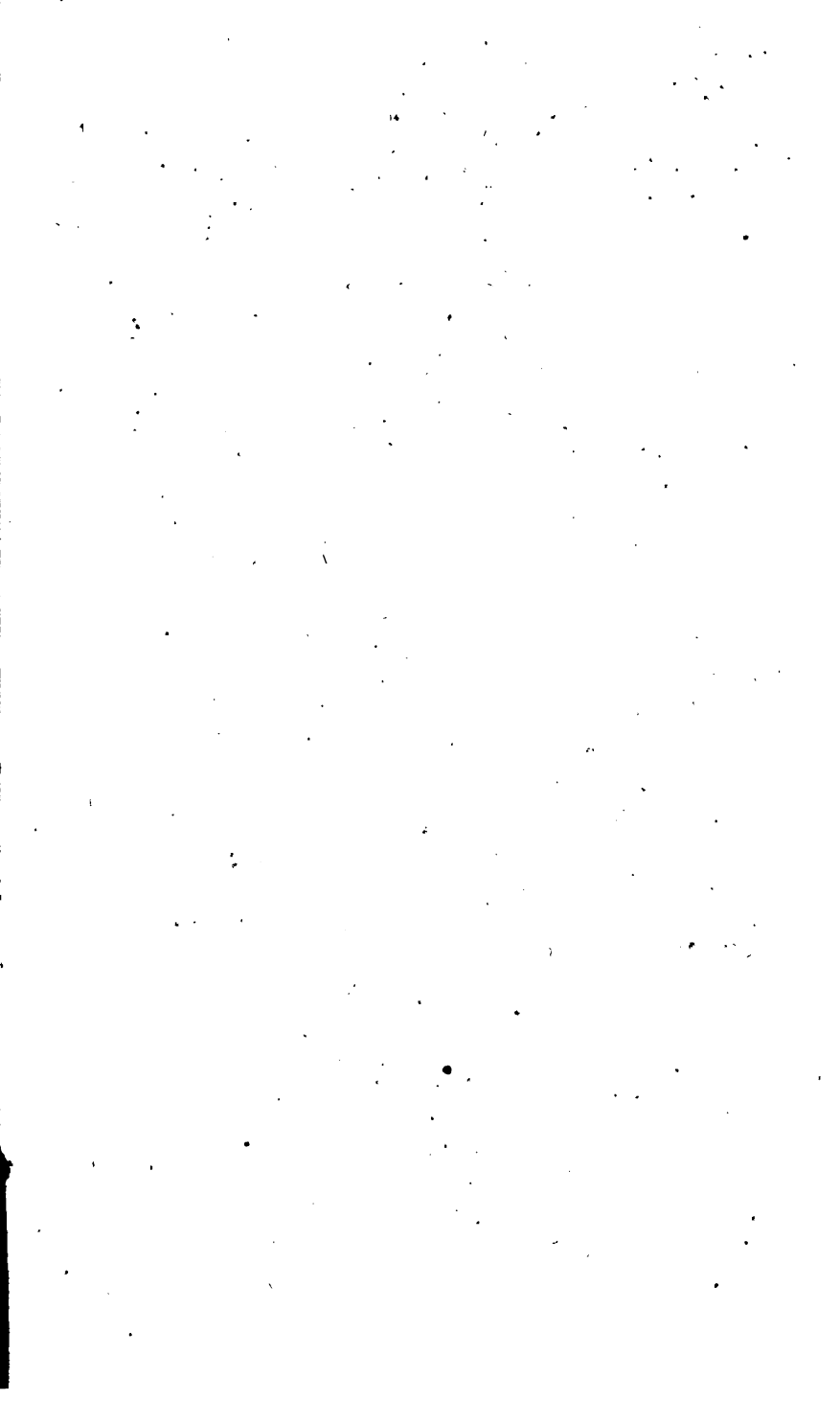
were fitted, and obtained valuable information from various others who had witnessed the effects of lightning at sea. They also invited the opinions of men acknowledged to be the best acquainted with this department of science; and they examined various other forms of lightning conductors for ships. But upon the whole evidence they conclude with the following recommendation:—
 “Having now completed our remarks on the several points to which their lordships’ instructions directed our attention, we trust we have shown, from the evidence of facts derived from the experience of many years, as well as by the opinions not only of scientific but professional men, the efficacy of Mr. Harris’s lightning conductors; and considering the number of lives which have been lost by lightning; the immense amount of property which has been destroyed, as shown by Mr. Harris, and is still exposed without adequate protection; the inconvenience which has arisen, and is still liable to arise, from the loss of the services of ships at moments of great critical importance; the difficulty of procuring new spars in times of war on foreign stations (not to mention the great expense of wages and victuals for the crews of ships while rendered useless, till repaired;) we again beg to state our unanimous opinion of the great advantages possessed by Mr. Harris’s conductors above every other plan, affording permanent security at all times, and under all circumstances, against the injurious effects of lightning, effecting this protection without any nautical inconvenience or scientific objection whatever; and we therefore most earnestly recommend their general adoption in the royal navy.”

* Vide Report, page 51 of the Commission, appointed to inquire into the plan of Wm. Snow Harris, Esq., F. R. S., relating to the protection of ships from the effects of lightning, ordered by the House of Commons to be printed, 27th January, 1840.

THE END.







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